

FARMER'S YEAR BOOK



**DIXIE HARDWARE
AND
MILL SUPPLIES**

Greenwood, S. C.



THE FARMER'S YEAR BOOK



THE FARMER'S LEDGER AND YEAR BOOK is presented in the hope that it will be an aid in keeping a daily record of your farming operations.

In addition, there are several pages which contain special information of value and oftentimes of immediate need.

This handy reference book and miniature ledger will be just what the name implies if you will let it. Read it over now . . . familiarize yourself with at least a part of the wealth of information it contains.

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FOR SPECIAL
INFORMATION

U. S. GOVERNMENT LAND MEASURE

A township—36 sections, each a mile square.

A section—640 acres.

A quarter section—half a mile square—160 acres.

An eighth section—half a mile long, north and south, and a quarter of a mile wide—80 acres.

A sixteenth section—a quarter of a mile square—40 acres.

The sections are all numbered 1 to 36, commencing at the northeast corner.

The sections are divided into quarters, which are named by the cardinal points. The quarters are divided in the same way. The description of a forty-acre lot would read: The south half of the west half of the southwest quarter of section 1 in township 24, north of range 7 west, or, as the case might be, and sometimes will fall short and sometimes overrun the number of acres it is supposed to contain.

NOTE—In most of the Western states, where all of the land was laid out by the Government, all titles, except in city lots, are passed by description, as under the Government survey, and there a square of 6 miles, or 36 square miles, is one township.

LAND MEASURE RULE

To find the number of acres in a body of land, multiply the length by the width (in rods) and divide this product by 160. When the opposite sides of the area are unequal but parallel, add them and take half of the sum for the mean length or width.

EXAMPLE: How many sq. rods, also acres, in a field 80 rods long and $62\frac{1}{2}$ rods wide?

$80 \times 62\frac{1}{2} = 5000$ sq. rods; $5000 \div 160 = 31\frac{1}{4}$ acres. Ans.

ACREAGE PER MILE OF VARIOUS WIDTHS

Width	Acres	Width	Acres
1 foot.....	0.121	15 feet.....	1.815
5 feet.....	0.605	16 feet.....	1.936
8 feet.....	0.968	18 feet.....	2.178
10 feet.....	1.21	20 feet.....	2.42
12 feet.....	1.452	24 feet.....	2.904
14 feet.....	1.694	25 feet.....	3.025

One Side of a Square Tract of Land Containing

1	Acre, is	208.7 ft.	=	43560 sq. ft.
1½	" "	255.6 "	=	65340 " "
2	" "	295.2 "	=	87120 " "
2½	" "	330 "	=	108900 " "
3	" "	361.5 "	=	130680 " "
5	" "	466.7 "	=	217800 " "
10	" "	660 "	=	435600 " "
1/10	Acre, is	66 ft.	=	4356 sq. ft.
1/8	" "	73.8 "	=	5445 " "
1/6	" "	85.2 "	=	7260 " "
1/4	" "	104.4 "	=	10890 " "
1/3	" "	120.5 "	=	14520 " "
1/2	" "	147.6 "	=	21780 " "
3/4	" "	180.8 "	=	32670 " "

A Lot 25 feet by 125, contains nearly 1/14th of an acre; 50 feet by 218, ¼ of an acre.

Dividing the area by one side, gives the other side if unknown. Thus, a lot, in order to contain 1/10th of an acre, must be $(4356 \div 25)$ 174¼ feet deep.

Distance Traveled in Plowing 1 Acre

FURROW WIDTH INCHES	DISTANCE MILES	FURROW WIDTH INCHES	DISTANCE MILES
10	9 9/10	14	7
11	9	15	6 1/2
12	8 1/4	16	6 1/6
13	7 1/2		

DUTY OF FARM MACHINES

Probably the simplest and easiest method of determining the duty of a tractor or horse-drawn implement in acres covered *per 10-hour* day is to multiply the effective width of cut in feet by the rate of travel in mile per hour.

Width cut in feet X Miles per hour = acres per day.

EXAMPLE: 1 ft. cut X 2 m.p.h. = 2 acres per day. The average speed of mules is 2 m.p.h. The average speed for tractors: plowing, 3 m.p.h.; harrowing, 4 m.p.h.; cultivating 2-4 m.p.h.; mowing, 3-4 m.p.h.; and combining, 3-4 m.p.h.

DRAINS REQUIRED FOR ACRE OF LAND

The following Table shows the number of tiles, of the different lengths made, which are required for an acre, and will be useful to those who may desire to purchase just enough for a particular piece of ground:

DISTANCE APART				12-in. Tiles	13-in. Tiles	14-in. Tiles	15-in. Tiles
Drains 12 ft. apart require.....				3,630	3,351	3,111	2,934
" 15 " "				2,904	2,681	2,489	2,323
" 18 " "				2,420	2,234	2,074	1,936
" 21 " "				2,074	1,914	1,777	1,659
" 24 " "				1,815	1,675	1,556	1,452
" 27 " "				1,613	1,480	1,383	1,291
" 30 " "				1,452	1,340	1,245	1,162
" 33 " "				1,320	1,218	1,131	1,056
" 36 " "				1,210	1,117	1,037	968

In reference to tile-pipe drain, it must be remembered that the ditch may be much narrower than when stones are used, thus making a considerable saving in the expense of digging. The upper part of the earth is taken out with a common spade, and the lower part with one made quite narrow for the purpose, being only about 4 in. wide at the point.

QUANTITY OF SILAGE REQUIRED AND MOST ECONOMICAL DIAMETER OF SILO FOR DAIRY HERD

Number of dairy cows in herd	Feed for 180 days			Feed for 240 days		
	Estimated tonnage of silage consumed	Size of silo		Estimated tonnage of silage consumed	Size of silo	
		Diam- eter	Height		Diam- eter	Height
	Tons	Feet	Feet	Tons	Feet	Feet
13	47	10	26	63	10	34
15	54	10	30	72	12	28
20	72	12	28	96	12	35
25	90	12	33	123	14	34
30	108	14	30	144	14	39
35	126	14	34	168	16	35
40	144	14	39	192	16	39
45	162	16	34	216	16	43
50	180	16	37	240	18	39
60	216	16	44	288	18	46
70	252	18	41	336	20	44

Figures based on 40 lb. silage per day per cow.

CAPACITIES OF ROUND SILOS IN TONS

Depth of Silage*	10-ft. Diameter	12-ft. Diameter	14-ft. Diameter	16-ft. Diameter	18-ft. Diameter	20-ft. Diameter
FEET	TONS	TONS	TONS	TONS	TONS	TONS
10	13.7	19.8	27.0	35.2	44.5	55.0
11	15.3	22.0	29.9	39.0	49.3	61.0
12	16.8	24.2	32.9	42.9	54.3	67.1
13	18.3	26.4	35.9	46.9	59.3	73.3
14	19.9	28.7	39.0	50.9	64.4	79.6
15	21.4	30.9	42.0	54.9	69.3	85.7
16	23.1	33.2	45.2	59.0	74.6	92.2
17	24.6	35.5	48.3	63.0	79.7	98.5
18	26.2	37.8	51.4	67.1	84.8	104.8
19	27.8	40.1	54.6	71.2	90.0	111.3
20	29.5	42.4	57.8	75.4	95.3	117.8
21	31.0	44.7	60.8	79.4	100.3	124.0
22	32.7	47.0	64.0	83.6	105.6	130.5
23	34.3	49.4	67.3	87.8	110.5	137.2
24	35.9	51.1	70.4	91.9	116.1	143.6
25	37.6	54.2	73.7	96.2	121.6	150.3
26	39.2	56.5	76.9	100.3	126.8	156.8
27	40.9	58.9	80.2	104.7	132.4	163.6
28	42.6	61.3	83.4	108.8	137.6	170.1
29	44.3	63.7	86.9	113.4	143.3	177.1
30	45.9	66.1	90.1	117.6	148.6	183.7
31	47.6	68.5	93.4	121.1	154.1	180.9
32	49.3	70.9	96.7	126.2	159.5	196.2
33	51.0	73.4	100.0	130.5	165.0	202.4
34	52.7	75.8	103.3	134.8	170.5	208.0
35	54.4	78.2	106.6	139.1	175.9	214.9
36	56.1	80.7	110.0	143.5	181.4	221.2
37	57.8	83.1	113.3	147.8	186.9	227.4
38	59.5	85.8	116.6	152.1	192.4	233.7
39	61.2	88.0	119.9	156.4	197.8	239.9
40	62.8	90.4	123.2	160.7	203.3	246.2
41	64.5	92.8	126.5	165.0	208.8	252.4
42	66.2	95.2	129.8	169.3	214.2	258.6
43	67.9	97.7	133.1	173.6	219.7	264.9
44	69.6	100.1	136.4	177.9	225.2	271.2
45	71.3	102.7	139.7	182.2	230.6	277.4

*Depth measured after silage has settled 30 days or more.

Approximate number of animals required to remove 2 in. of silage per day*, from silos of various diameters and at different rates of feeding.

Diameter feet	Pounds of silage to be removed daily	Number of animals that may be fed with daily allowance of:			
		40 lb.	30 lb.	20 lb.	15 lb.
10	525	13	18	26	35
12	755	19	25	38	50
14	1,030	26	34	52	69
16	1,340	34	45	67	90
18	1,700	42	57	85	113
20	2,100	53	70	105	140

*This is for winter feeding; 3 in. should be removed in summer.

MEASURING HAY IN STACKS

Round Stacks

The volume in cubic feet of round stacks is best figured by using this formula:

$$\text{Volume} = [(.04 \times O) \text{ minus } (.012 \times C)] \times C \times C$$

In this formula, O equals the over, or distance in feet from the ground on one side up and over the peak down to the ground on the other side; it is advisable to take two measurements of O from different spots and then average them. C equals the circumference, or distance in feet around the stack at the ground.

Example: If O measures 40 ft. and C measures 60 ft., the volume in cu. ft. is figured this way.

$$\begin{aligned}\text{Volume} &= [(.04 \times 40) \text{ minus } (.012 \times 60)] \times 60 \times 60 \\ &= [1.6 \text{ minus } .72] \times 60 \times 60 \\ &= .88 \times 60 \times 60 \\ &= 3,168 \text{ cu. ft.}\end{aligned}$$

Oblong or Rectangular Stacks

The volume of an oblong or rectangular stack equals its length times the area of its cross section. The length, of course, can be easily measured, but an accurate formula is needed to figure the area of the cross section from the two other measurements obtainable, namely the over and the width. The over, O in the formulas below, is the distance from the ground on one side up and over the peak down to the ground on the other side. The width, W in the formulas below, is the width of the stack at the ground. The length, L in the formulas below, is the average length of the stack at the ground.

The three major styles of stacks, with the formulas for each one, are as follows:

For low, round-topped stacks.

$$\text{Volume} = [(.52 \times O) \text{ minus } (.44 \times W)] \times W \times L$$

For high, round-topped stacks.

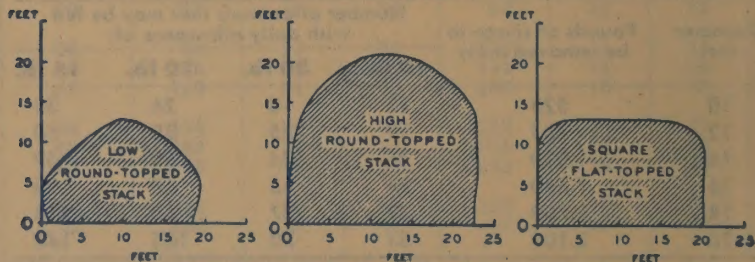
$$\text{Volume} = [(.52 \times O) \text{ minus } (.46 \times W)] \times W \times L$$

For square, flat-topped stacks.

$$\text{Volume} = [(.56 \times O) \text{ minus } (.55 \times W)] \times W \times L$$

Example: Determine cu. ft. in a square, flat-topped stack if L measures 50 ft., W measures 35 ft., and O measures 70 ft. Using these numbers in the proper formula, we have:

$$\begin{aligned}\text{Volume} &= [(.56 \times 70) \text{ minus } (.55 \times 35)] \times 35 \times 50 \\ &= [39.20 \text{ minus } 19.25] \times 35 \times 50 \\ &= 19.95 \times 35 \times 50 \\ &= 34,912.5 \text{ cu. ft.}\end{aligned}$$



Cross sections of typical oblong stacks

DETERMINING HAY TONNAGE

To find the number of tons of hay in a given stack, simply divide the number of cubic feet in the stack, as calculated, using the system outlined on Page 6, by the cubic feet per ton, as shown in the table below.

CUBIC FEET PER TON OF SETTLED HAY

Type of Hay	Cu. Ft.	Type of Hay	Cu. Ft.
Alfalfa	470	Straw (baled)	200
Baled Hay (closely stacked) ..	175	Straw (loose)	800
Chopped Hay	210	Timothy	625
Clover	500	Wild Hay	450

BEST TIME TO CUT HAY

Cut	When
Alfalfa	1/10 to 1/4 of crop is blooming . . . or new shoots begin developing from the crown.
Alsike and Red Clover	1/2 to full bloom.
Annual Lespedeza	In full bloom to early seed stage depending on height and leafiness.
Crimson Clover	Flower fading at base of most advanced heads.
Grasses	Heading out to bloom stage.
Ladino Clover	In full bloom.
Sericea	12 to 15 inches high.
Small Grains	Grain is in milk stage.
Soybeans and Cowpeas	Pods are from 1/2 to fully matured.
Sweet Clover	Blooming begins.

It is better to harvest hay early than late!

MEASURING CORN

Owing to the many varied conditions affecting the size and quality of kernel and cob, it is difficult to give a universal measurement rule. The following simple rules, however, are recognized in most sections of the country.

● Figuring Bushels of Ear Corn in Crib: Determine the number of cubic feet in the crib and multiply by $4\frac{1}{2}$, then divide by 10; this rule applies for average corn. If the cobs are well filled and the corn is sound and dry and well settled in the crib, do as above, but divide by 9 instead of 10. If the cobs aren't well filled or the corn is damp and of inferior quality, divide by 11.

● Figuring Bushels of Shelled Corn in Bin: Determine the number of cubic feet of shelled corn in the bin and divide by 2, if the corn is heavy grain on small cob. For medium cob, medium grain, do the same, only divide by $2\frac{1}{4}$ instead of 2. For medium cob, light grain, divide by $2\frac{3}{4}$.

YOUR SOCIAL SECURITY

If you own, work or rent a farm, recent changes in the Social Security Law will be of interest to you. The Federal Old Age and Survivors Insurance now covers nearly all families in America. To learn more about this law and how it affects you, contact your local office of the Social Security Administration (address obtainable at the Post Office) or the nearest Office of the Collector of Internal Revenue... in the meantime here are the main features.

If your work is covered by the law, and most farm work is, you make social security tax contributions to a government insurance fund during your working years in order to provide an income for yourself or your family in case your income is cut off by old age, disability or death. For people who do meet the requirements of this law, this insurance provides:

Monthly payments when they reach 65.

(Optional age 62 for women)

Survivors payments to their families when they die.

Disability payments at age 50 to 65 for those totally disabled.

The determination of the amount of your benefits depends upon the amount of your average earnings over the years, after you have been declared eligible for these benefits. These do not come to you automatically, it is your responsibility, or that of your survivors to file a claim for the monthly or lump sum payments to which you may be entitled. The law specifies the length of time within which this claim must be filed after you become eligible.

To get social security benefits you must have been in work covered by the law for a certain length of time... this time is usually measured in "quarters of coverage." A quarter is one of four three-month periods of the year beginning on Jan. 1, Apr. 1, July 1 or Oct. 1. The number of quarters of coverage required to fully qualify is determined by the date upon which you reach retirement age.

FARMWORKERS

If you work on a farm for hire, you will get credit for one quarter of coverage for every \$100 cash you earn... no credit for board and room, etc. However there are certain minimum conditions which must be met before you can get any credit at all. You must earn \$150 cash during the year, before you can receive quarterly credit at this rate of one quarter per \$100. Or if you don't earn this much during the year, you may qualify if you have done farm work for cash, figured on some time basis, such as so much per hour, day or week, for 20 or more days during the year.

As a regular farmworker, you must make available to your employer, your own social security card and identification number. If you have no card, fill in Form SS-5, "Application for Social Security Account Number."

If you are the employer hiring the farmworker, you also have responsibilities as regards this law. You must have an identification number also, which you can get by filling in application Form SS-4. Generally speaking the law intends that

the employer deduct the employee's share of the social security tax from his wages every payday. If the employer has reasonable grounds to doubt that a certain worker will qualify, he may withhold the deduction until later. The current rate for the tax is $4\frac{1}{2}\%$; the employer pays $2\frac{1}{4}\%$ out of his own pocket and deducts the other $2\frac{1}{4}\%$ of the employee's cash wages from his paycheck. This tax is based on income to the employee up to and including \$4200 for the year, no social security taxes are deducted or payed on wages over this amount. As an employer you must file report Form 941, "Employer's Quarterly Tax Return," within one month from the end of a quarterly period, and remit to the local Collector of Internal Revenue the social security taxes on the wages paid to your employees. You must keep all records pertinent to these taxes available for inspection by the Bureau of Internal Revenue for 4 years after payment. And at the end of each calendar year, or at the end of certain farmworkers' employment, you must furnish each with a written statement showing your own name and account number, the employee's name and account number, the total amount of taxable wages paid in cash during the year, and the total employee tax deducted.

SELF-EMPLOYED FARMERS

In addition to the obligations you may have as a self-employed farmer because of the fact that you hire farmworkers, if you operate a farm for profit, your own or one you've rented from someone else, then your earnings may be counted toward social security benefits for you and your family. There are three ways available to you for figuring your earnings for social security tax purposes, and you may be able to raise or lower your taxes as you see fit. Reporting higher earnings will mean you must pay more taxes, but it will also mean that you will have greater benefits upon retirement or at death. As a self-employed farmer you must pay a social security tax of $3\frac{3}{8}\%$ of your reported earnings up to and including \$4200. The three methods of determining earnings are:

- (1) If your gross income is \$1800 or less for the year, you may report your actual net earnings or you may use a figure of $\frac{2}{3}$ of your gross income.
- (2) If your gross income is more than \$1800, but your net income is less than \$1200, you may report your actual net earnings or you may use the figure \$1200.
- (3) If your gross income is more than \$1800 and your net earnings are \$1200 or more, then you must use your actual net earnings for figuring your tax.

FARM RENTALS

If the farm land you own is farmed by someone else, the cash or crop shares you receive from the tenant or share-farmer will count for social security purposes, if under your arrangement you "participate materially" in the production of the crops or livestock or in the management of the production. In order to "participate materially" you must take an important part in the management decisions or in actual production.

HANDY ROPE INFORMATION

The safe working strength of various diameters of new manila and sisal rope, approximate weight, and the corresponding sizes of block.

Diameter of rope (inches)	Safe working stress		Approximate length per pound	Size of block
	Manila	Sisal		
	Pounds	Pounds	Feet	Inches
1/4.....	100	70	51.0	2
3/8.....	200	140	24.5	3
1/2.....	400	280	13.6	4
5/8.....	800	560	7.5	5
3/4.....	980	686	6.2	6
7/8.....	1,400	980	4.5	7
1.....	1,640	1,148	3.7	9
1 1/4.....	2,500	1,750	2.4	12
1 1/2.....	3,500	2,450	1.7	15

DRESSING WEIGHTS OF SLAUGHTERED ANIMALS

Cattle Percentage

Dairy Cows	40-50
Prime Cattle	60 up
Average for Cattle.....	55

Hogs

Prime Heavy	82-84
Medium Butchers	78-80
Shipper Hogs	72-76

Sheep

Wide Range	40-65
Average Lamb	48-52

Chickens

Cocks	76
Hens	76
Pullets	74

WATER REQUIREMENTS OF ANIMALS

HORSE—7 to 10 gallons daily, average about 8½ gallons
COW —6 to 10 gallons daily, average about 8½ gallons
HOG —2 to 3 gallons daily, average about 2½ gallons
SHEEP—1 to 2 gallons daily, average about 1½ gallons
100 Chickens need 40 pounds of water a day—5½ gallons

RULES FOR MEASUREMENT

To find diameter of a circle multiply circumference by .31831.

To find circumference of a circle multiply diameter by 3.1416.

To find area of a circle multiply square of diameter by .7854.

To find surface of a ball, or sphere, multiply square of diameter by 3.1416.

To find volume of a ball, or sphere, multiply cube of diameter by .5236.

To find area of a triangle multiply the perpendicular height times the base and divide by two.

To find the area of trapezoid multiply half sum of parallel sides times perpendicular height.

To find area of ellipse multiply long diameter times short diameter times .7854.

To find area of parallelogram multiply base times perpendicular height.

RECTANGULAR BODIES are reduced to cubic feet or inches by multiplying the length, width, and height together. Thus a bin 8 ft. long, 5 ft. wide, and 4 ft. high contains $8 \times 5 \times 4 = 160$ cubic feet.

CYLINDRICAL BODIES are reduced to cylindrical feet or inches by multiplying the square of the diameter by the depth; and they are reduced to cubic feet by multiplying the cylindrical feet by .7854. Thus a tank, diameter 5 ft., depth 4 ft., contains $5^2 \times 4 = 100$ cylindrical feet; and $100 \times .7854 = 78\frac{1}{2}$ cubic feet.

THE HEIGHT of tall objects like trees and buildings may be measured by using this simple system. Set up a stick in the ground and measure its shadow. Measure the length of the shadow of the tree, or other object. The height of the tree equals the length of the tree's shadow times the height of the stick divided by the length of the stick's shadow.

Tables Convenient for Taking Inside Dimensions

A box 25 x 24 x 14.7 inches will hold a barrel of 31½ gallons.

A box 15 x 14 x 11 inches will hold 10 gallons.

A box 8¼ x 7 x 4 inches will hold a gallon.

A box 4 x 4 x 3.6 inches will hold a quart.

A box 24 x 28 x 16 inches will hold five bushels.

A box 16 x 12 x 11.2 inches will hold a bushel.

A box 12 x 11.2 x 8 inches will hold a half-bushel.

A box 7 x 6.4 x 12 inches will hold a peck.

A box 8.4 x 8 x 4 inches will hold a peck, or four dry quarts.

A box 6 x 5.6 x 4 inches deep will hold a half-gallon.

A can 7 inches in diameter by 6 inches deep will hold a gallon.

WEIGHTS AND MEASURES

COMMERCIAL WEIGHT

27 11/32 grains (gr.)	= 1 dram (dr.)
16 drams	= 1 ounce (oz.)
16 ounces	= 1 pound (lb.)
2000 pounds	= 1 ton (T.)
2240 pounds	= 1 long ton

DRY MEASURE

2 pints (pt.)	= 1 quart (qt.)
8 quarts	= 1 peck (pk.)
4 pecks	= 1 bushel (bu.)

LONG MEASURE

12 inches (in.)	= 1 foot (ft.)
18 inches	= 1 cubit
3 feet (36 in.)	= 1 yard (yd.)
16½ ft. (5½ yds.)	= 1 rod or pole
40 poles	= 1 furlong
320 rods (8 furlongs)	= 1 mile (mi.)
5,280 ft. (1760 yds.)	= 1 mile
69⅛ miles	= 1 degree

TIME MEASURE

60 seconds (sec.)	= 1 minute (min.)
60 minutes	= 1 hour (hr.)
24 hours	= 1 day (da.)
365¼ days	= 1 year (yr.)

SQUARE MEASURE

144 square inches	= 1 square foot
9 square feet	= 1 square yard
30¼ square yards	= 1 square rod, perch, or pole
272¼ square feet	= 1 square rod, perch, or pole
40 square rods	= 1 square rood
4 square roods	= 1 acre
43,560 square feet	= 1 acre
640 acres	= 1 square mile

TROY WEIGHT

24 grains (gr.)	= 1 pennyweight (pwt.)
20 pwts.	= 1 ounce
12 ounces	= 1 pound

CIRCULAR MEASURE

60 seconds (")	= 1 minute (')
60 minutes	= 1 degree (°)
360 degrees	= 1 circle

SURVEYORS' MEASURE

7.92 inches	= 1 link (lk.)
25 links (16½ ft.)	= 1 rod
4 rods (66 ft.)	= 1 chain (ch.)
10 square chains	= 1 acre

LIQUID MEASURE

4 gills (gi.)	= 1 pint (16 fluid ozs.)
2 pints	= 1 quart
4 quarts	= 1 gallon (gal.)
31½ gallons	= 1 barrel (bbl.)
2 barrels	= 1 hogshead

CUBIC MEASURE

67.2 cubic inches	= 1 dry quart
231 cubic inches	= 1 gallon
537.6 cubic inches	= 1 peck
1728 cubic inches	= 1 cubic foot
2150.4 cubic inches	= 1 bushel
1¼ cubic feet	= 1 bushel nearly
24¾ cubic feet	= 1 perch (stone)
27 cubic feet	= 1 cubic yard
128 cubic feet	= 1 cord (of wood)

USEFUL INFORMATION

Double diameter of pipe increases its capacity 4 times.

Double riveting is 16-20% stronger than single.

To find the pressure in lbs. per sq. in. at the base of a column of water (a vertical water pipe, for instance), multiply the column height in ft. by 434.

A bunch of laths (unit size 4 ft. long by 1½ in. wide) will cover about 3 sq. yds. 70 sq. yds. of surface requires about 100 laths and 11 lbs. of lath nails.

100 sq. ft. of roof area, 4 in. to the weather, requires about 1000 standard shingles and 5 lbs. of nails.

5 courses of brick will lay 1 ft. in height on a chimney.

To determine the field speed of a tractor, walk beside it for 20 sec., counting the number of 3-ft. steps you take during that period. Then point off one place to get speed in m.p.h.

To figure value of items sold by the ton, you can multiply the number of lbs. by the price per ton, point off 3 places and divide by two.

A standard single roll of wallpaper is 22 in. wide and 252 in. (21 ft.) long.

Steam rising from water at its boiling point (212° F.) has a pressure of 14.7 lbs. per sq. in. (same as atmospheric normal).

Each nominal horsepower of a boiler requires 30-35 lbs. of water.

A wagon bed 3 ft. wide and 10 ft. long will hold 2 bushels for every inch in depth.

GRANARIES — WAGON-BEDS

To Find Contents, in Bushels

RULE: Determine the number of cubic feet and multiply by .8 (exact .8036).

EXAMPLES: Find the contents of a granary 14 ft. long, $7\frac{1}{2}$ ft. wide, and 6 ft. high. $14 \times 7\frac{1}{2} \times 6 = 630$ cu. ft.; $630 \times .8 = 504$ bu. Contents of wagon-bed 10 ft. x 3 ft. x $1\frac{1}{2}$ ft. = 45 cu. ft.; $45 \times .8 = 36$ bu.

BARRELS — CASKS

To Find Contents, in Gallons

RULE: Multiply the square of the mean diameter by the depth and that resulting product by .0034 to find the gallon capacity.

EXAMPLES: Find the capacity of a barrel whose mean diameter is 20 in. with a depth of 32 in. $20^2 \times 32 = 12,800$; $12,800 \times .0034 = 43\frac{1}{2}$ gals. Find the capacity of a cask whose mean diameter is $12\frac{1}{2}$ in. with a 20 in. depth. $12\frac{1}{2}^2 \times 20 \times .0034 = 10\frac{5}{8}$ gals.

RECTANGULAR TANKS

To Find Contents, in Gallons

RULE: To determine number of gallons multiply cubic volume in feet by $7\frac{1}{2}$ (exact 7.48); for contents in barrels multiply by .2375.

EXAMPLE: Find the capacity of an oblong tank 10 ft. long, 3 ft. wide, and $1\frac{2}{3}$ ft. deep. $10 \times 3 \times 1\frac{2}{3} = 50$ cu. ft.; $50 \times 7\frac{1}{2} = 375$ gals.; $50 \times .2375 = 11\frac{7}{8}$ bbls.

ROUND CISTERNS AND TANKS

To Find Contents, in Gallons

Depth in Feet	Diameter in Feet								
	4	5	6	7	8	9	10	11	12
4	376	588	846	1,152	1,504	1,904	2,350	2,844	3,384
5	470	735	1,058	1,439	1,880	2,380	2,938	3,555	4,230
6	564	881	1,269	1,727	2,256	2,855	3,525	4,265	5,076
7	658	1,028	1,481	2,015	2,632	3,331	4,113	4,976	5,922
8	752	1,175	1,692	2,303	3,008	3,807	4,700	5,687	6,768
9	846	1,322	1,904	2,591	3,384	4,283	5,288	6,398	7,614
10	940	1,469	2,115	2,879	3,760	4,759	5,875	7,109	8,460
11	1,034	1,616	2,327	3,167	4,123	5,235	6,463	7,820	9,306
12	1,128	1,763	2,537	3,455	4,512	5,711	7,050	8,531	10,152

NOTE: The U. S. Standard gallon contains 231 cu. in. while the English Imperial gallon contains 277.274 cu. in. To change U. S. gals. to English gals. multiply the number of U. S. gals. by $\frac{5}{6}$. 100 U. S. gals. $(100 \times \frac{5}{6}) = 83\frac{1}{3}$ Eng. gals. To change English gals. to U. S. gals. multiply the English gals. by $1\frac{1}{5}$. 100 Eng. gals. $(100 \times 1\frac{1}{5}) = 120$ U. S. gals.

MISCELLANEOUS EQUIVALENTS

- A pint's a lb. (approximately of: water, wheat, butter, sugar, or blackberries.
- 196 lbs. of flour make 1 bbl.
- 200 lbs. beef or pork make 1 bbl.
- 165 lbs. potatoes make 1 bbl.
- 135 lbs. apples make 1 bbl.
- 280 lbs. salt make 1 bbl.
- 1 bbl. fish weighs 200 lbs.
- 1 gal. water weighs about $8\frac{1}{3}$ lbs.
- 1 gal. milk weighs about 8.6 lbs.
- 1 gal. cream weighs about 8.4 lbs.
- $46\frac{1}{2}$ qts. of milk weigh 100 lbs.
- 1 cu. ft. water weighs $62\frac{1}{2}$ lbs., contains $7\frac{1}{2}$ gals.
- 1 gal. kerosene weighs about $6\frac{1}{2}$ lbs.
- 1 bbl. cement contains 3.8 cu. ft.
- 1 bbl. oil contains 42 gals.
- 1 bbl. dry commodities contains 7,065 cu. in. or 105 dry qts.
- 1 standard bale cotton weighs 480 lbs.
- 1 keg of nails weighs 100 lbs.
- 1 keg of powder weighs 25 lbs.
- 1 stone or lead of iron weighs 14 lbs.
- 1 pig of lead or iron weighs $21\frac{1}{2}$ stones.
- 1 cu. ft. Anthracite broken coal averages about 54 lbs.
- 1 cu. ft. Bituminous broken coal averages about 49 lbs.
- 1 ton of loose Anthracite occupies 40-43 cu. ft.
- 1 ton of loose Bituminous occupies 40-48 cu. ft.
- 1 horsepower (hp.) is equivalent to raising 33,000 lbs. 1 ft. per minute.
- $\frac{1}{3}$ in. equals one size in measuring shoes.
- 4 in. equal 1 hand in measuring horses.
- 9 in. equal 1 span.
- 6 ft. equal 1 fathom.
- 6,080 ft. equal 1 nautical mile.
- 1 board ft. equals 144 cu. in.
- 1 cylindrical ft. contains $5\frac{7}{8}$ gals.
- 1 cu. ft. equals .8 bushel.
- 12 dozen (doz.) equal 1 gross (gr.).

INTEREST TABLE

This will be found convenient in the absence of extended interest tables. To find the interest on a given sum, for a given period, at a given rate:

At 3% multiply the principal by the number of days and divide by . 120	
At 4% as above, and divide by	90
At 5% as above, and divide by	72
At 6% as above, and divide by	60
At 7% as above, and divide by	52
At 8% as above, and divide by	45
At 9% as above, and divide by	40
At 10% as above, and divide by	36
At 12% as above, and divide by	30

AIDS FOR CHOOSING GOOD LAYING HENS

Parts of Body to Observe	Good Layers	Poor Layers
Back	Long, wide	Short, narrow
Body	Long, wide, deep	Short, narrow, shallow
Vent	Large, moist, oblong	Small, dry
Shanks	White, thin, flat	Yellow, plump, round
Health	Vigorous, active, well fleshed, alert	Not vigorous, inactive, underweight, drowsy
Plumage	Bright, glossy, clean, not worn	worn, ragged
Pelvic bones	Thin, straight, pliable	Thick, curved in
Keel (breast) bone	Slopes downward	Slopes upward
Skin	Soft, pliable, loose	Hard, dry, tight
Fat	Good flesh, not excess fat	Excess fat under skin on body and especially around abdomen
Feathering	Close, tight	Loose, fluffy
Molting	Late	Early
Comb	Large, red, plump	Small, scaly, shriveled
Head	Feminine, refined	masculine, beefy

NOTE: July, August, September usually best months to cull. Don't score breeds not having yellow pigment on pigmentation.

SUGGESTED SPACE REQUIREMENTS FOR HENS

Lot Area	175-200 sq. ft.
Outside Pen	4-8 sq. ft. desirable if building floor is less than 3 per bird.
Floor Area	2-3½ sq. ft.
Roost Space	7-10 in., 13-15 in. apart
Nests	1 per 5-7 hens; or 1 community nest 2 x 6 ft. for every 50 hens
Windows	1 sq. ft. per 25-50 sq. ft. floor area.
Light	1 50-watt bulb per 200 sq. ft. floor area
Doors	1 15 x 16 in. per 100 hens
Feed Troughs	3-5 in. linear
Self Feeder	1 in. space
Water Space	1 8-gal. waterer, 1 automatic jet, or 1 float type waterer per 600 hens.

AVERAGE PERIOD OF INCUBATION

Chickens	20-22 days
Geese	28-34 days
Ducks	28 days
Turkeys	27-29 days
Guinea fowls	28 days
Pheasants	25 days
Ostriches	40-42 days

INFORMATION ON BARBED WIRE

SPECIFICATIONS FOR BARBED WIRE FENCES

Barbs			Wire	Gauge
Points (Number)	Shape	Spacing Inches	Strand No.	Barbs No.
2	Round	3 (hog).....	12	14
		5 (cattle).....		
		3 (hog).....	12½	
		5 (cattle).....		
4	Round	4 (hog).....	12	13
		6 (cattle).....		
		4 (hog).....	12½	
		6 (cattle).....		
2	Round	3 (hog).....	12½	14
		5 (cattle).....		
2	Flat	3 (hog).....	12½	14
		5 (cattle).....		
2	Half Round	3 (hog).....	12½	14
		5 (cattle).....		
4	Half Round	3 (hog).....	12½	14
		6 (cattle).....		
2	Round	3 (hog).....	14	16
		5 (cattle).....		
4	Round	3 (hog).....		
		5 (cattle).....		
No barbs 2 strands			12	
twisted			12½	

SIZES AND WEIGHTS OF WIRE USED IN FARM FENCING

Gauge No.	Diameter	Surface Area	Weight Per	Length Per	Weight Per—	
		Per Pound	100 Feet	Pound	Mile	Rod
	Inches	Sq. Feet	Pounds	Feet	Pounds	Pounds
9	.01483	0.66	5.87	17.05	309.7	0.97
10	.01350	.73	4.86	20.57	256.7	.80
11	.01205	.82	3.87	25.82	204.5	.64
12	.01055	.93	2.97	33.69	156.7	.49
12½	.0990	.98	2.64	37.82	139.4	.43
13	.0915	1.08	2.23	44.78	117.9	.37
14	.0800	1.23	1.70	58.58	90.1	.28
14½	.0760	1.29	1.54	64.93	81.3	.25
19	.0410	28.7	.44	223.00	23.7	.07
20	.0348	33.8	.32	309.60	17.0	.05

APPROXIMATE AMOUNT OF BARBED WIRE REQUIRED FOR FENCES

2 strand, 12½ gauge hog wire with 2 point, 14 gauge barbs, 3 inches between barbs

	1 line	2 lines	3 lines
1 rod in length	1 lb.	2 lbs.	3 lbs.
100 rods	100 lbs.	200 lbs.	300 lbs.
100 feet	6½/16 lbs.	12½ lbs.	18¾/16 lbs.
1 square acre	50¾ lbs.	101½ lbs.	152 lbs.
1 square mile	1,280 lbs.	2,564 lbs.	3,840 lbs.
1 side of square mile	320 lbs.	640 lbs.	960 lbs.

BOARD MEASURE

Size		Length in Feet							
Nom.	Actual	8	10	12	14	16	18	20	
		Board Feet							
1x 2	$\frac{3}{4}$ x 1 $\frac{5}{8}$	1 $\frac{1}{3}$	1 $\frac{2}{3}$	2	2 $\frac{1}{3}$	2 $\frac{2}{3}$	3	3 $\frac{1}{3}$	
1x 3	$\frac{3}{4}$ x 2 $\frac{5}{8}$	2	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$	5	
1x 4	$\frac{3}{4}$ x 3 $\frac{5}{8}$	2 $\frac{2}{3}$	3 $\frac{1}{3}$	4	4 $\frac{2}{3}$	5 $\frac{1}{3}$	6	6 $\frac{2}{3}$	
1x 6	$\frac{3}{4}$ x 5 $\frac{5}{8}$	4	5	6	7	8	9	10	
1x 8	$\frac{3}{4}$ x 7 $\frac{1}{2}$	5 $\frac{1}{3}$	6 $\frac{2}{3}$	8	9 $\frac{1}{3}$	10 $\frac{2}{3}$	12	13 $\frac{1}{3}$	
1x10	$\frac{3}{4}$ x 9 $\frac{1}{2}$	6 $\frac{2}{3}$	8 $\frac{1}{3}$	10	11 $\frac{2}{3}$	13 $\frac{1}{3}$	15	16 $\frac{2}{3}$	
1x12	$\frac{3}{4}$ x11 $\frac{1}{2}$	8	10	12	14	16	18	20	
1x14	$\frac{3}{4}$ x13 $\frac{1}{2}$	9 $\frac{1}{3}$	11 $\frac{2}{3}$	14	16 $\frac{1}{3}$	18 $\frac{2}{3}$	21	23 $\frac{1}{3}$	
1x16	$\frac{3}{4}$ x15 $\frac{1}{2}$	10 $\frac{2}{3}$	13 $\frac{1}{3}$	16	18 $\frac{2}{3}$	21 $\frac{1}{3}$	24	26 $\frac{2}{3}$	
2x 2	1 $\frac{5}{8}$ x 1 $\frac{5}{8}$	2 $\frac{2}{3}$	3 $\frac{1}{3}$	4	4 $\frac{2}{3}$	5 $\frac{1}{3}$	6	6 $\frac{2}{3}$	
2x 3	1 $\frac{5}{8}$ x 2 $\frac{5}{8}$	4	5	6	7	8	9	10	
2x 4	1 $\frac{5}{8}$ x 3 $\frac{5}{8}$	5 $\frac{1}{3}$	6 $\frac{2}{3}$	8	9 $\frac{1}{3}$	10 $\frac{2}{3}$	12	13 $\frac{1}{3}$	
2x 6	1 $\frac{5}{8}$ x 5 $\frac{5}{8}$	8	10	12	14	16	18	20	
2x 8	1 $\frac{5}{8}$ x 7 $\frac{1}{2}$	10 $\frac{2}{3}$	13 $\frac{1}{3}$	16	18 $\frac{2}{3}$	21 $\frac{1}{3}$	24	26 $\frac{2}{3}$	
2x10	1 $\frac{5}{8}$ x 9 $\frac{1}{2}$	13 $\frac{1}{3}$	16 $\frac{2}{3}$	20	23 $\frac{1}{3}$	26 $\frac{2}{3}$	30	33 $\frac{1}{3}$	
2x12	1 $\frac{5}{8}$ x11 $\frac{1}{2}$	16	20	24	28	32	36	40	
2x14	1 $\frac{5}{8}$ x13 $\frac{1}{2}$	18 $\frac{2}{3}$	23 $\frac{1}{3}$	28	32 $\frac{2}{3}$	37 $\frac{1}{3}$	42	46 $\frac{2}{3}$	
2x16	1 $\frac{5}{8}$ x15 $\frac{1}{2}$	21 $\frac{1}{3}$	26 $\frac{2}{3}$	32	37 $\frac{1}{3}$	42 $\frac{2}{3}$	48	53 $\frac{1}{3}$	
3x 3	2 $\frac{5}{8}$ x 2 $\frac{5}{8}$	6	7 $\frac{1}{2}$	9	10 $\frac{1}{2}$	12	13 $\frac{1}{2}$	15	
3x 4	2 $\frac{5}{8}$ x 3 $\frac{5}{8}$	8	10	12	14	16	18	20	
3x 6	2 $\frac{5}{8}$ x 5 $\frac{5}{8}$	12	15	18	21	24	27	30	
3x 8	2 $\frac{5}{8}$ x 7 $\frac{1}{2}$	16	20	24	28	32	36	40	
3x10	2 $\frac{5}{8}$ x 9 $\frac{1}{2}$	20	25	30	35	40	45	50	
3x12	2 $\frac{5}{8}$ x11 $\frac{1}{2}$	24	30	36	42	48	54	60	
3x14	2 $\frac{5}{8}$ x13 $\frac{1}{2}$	28	35	42	49	56	63	70	
3x16	2 $\frac{5}{8}$ x15 $\frac{1}{2}$	32	40	48	56	64	72	80	
4x 4	3 $\frac{5}{8}$ x 3 $\frac{5}{8}$	10 $\frac{2}{3}$	13 $\frac{1}{3}$	16	18 $\frac{2}{3}$	21 $\frac{1}{3}$	24	26 $\frac{2}{3}$	
4x 6	3 $\frac{5}{8}$ x 5 $\frac{5}{8}$	16	20	24	28	32	36	40	
4x 8	3 $\frac{5}{8}$ x 7 $\frac{1}{2}$	21 $\frac{1}{3}$	26 $\frac{2}{3}$	32	37 $\frac{1}{3}$	42 $\frac{2}{3}$	48	53 $\frac{1}{3}$	
4x10	3 $\frac{5}{8}$ x 9 $\frac{1}{2}$	26 $\frac{2}{3}$	33 $\frac{1}{3}$	40	46 $\frac{2}{3}$	53 $\frac{1}{3}$	60	66 $\frac{2}{3}$	
4x12	3 $\frac{5}{8}$ x11 $\frac{1}{2}$	32	40	48	56	64	72	80	
4x14	3 $\frac{5}{8}$ x13 $\frac{1}{2}$	37 $\frac{1}{3}$	46 $\frac{2}{3}$	56	65 $\frac{1}{3}$	74 $\frac{2}{3}$	84	93 $\frac{1}{3}$	
4x16	3 $\frac{5}{8}$ x15 $\frac{1}{2}$	42 $\frac{2}{3}$	53 $\frac{1}{3}$	64	74 $\frac{2}{3}$	85 $\frac{1}{3}$	96	106 $\frac{2}{3}$	
6x 6	5 $\frac{1}{2}$ x 5 $\frac{1}{2}$	24	30	36	42	48	54	60	
6x 8	5 $\frac{1}{2}$ x 7 $\frac{1}{2}$	32	40	48	56	64	72	80	
6x10	5 $\frac{1}{2}$ x 9 $\frac{1}{2}$	40	50	60	70	80	90	100	
6x12	5 $\frac{1}{2}$ x11 $\frac{1}{2}$	48	60	72	84	96	108	120	
6x14	5 $\frac{1}{2}$ x13 $\frac{1}{2}$	56	70	84	98	112	126	140	
6x16	5 $\frac{1}{2}$ x15 $\frac{1}{2}$	64	80	96	112	128	144	160	
8x 8	7 $\frac{1}{2}$ x 7 $\frac{1}{2}$	42 $\frac{2}{3}$	53 $\frac{1}{3}$	64	74 $\frac{2}{3}$	85 $\frac{1}{3}$	96	106 $\frac{2}{3}$	
8x10	7 $\frac{1}{2}$ x 9 $\frac{1}{2}$	53 $\frac{1}{3}$	66 $\frac{2}{3}$	80	93 $\frac{1}{3}$	106 $\frac{2}{3}$	120	133 $\frac{1}{3}$	
8x12	7 $\frac{1}{2}$ x11 $\frac{1}{2}$	64	80	96	112	128	144	160	
8x14	7 $\frac{1}{2}$ x13 $\frac{1}{2}$	74 $\frac{2}{3}$	93 $\frac{1}{3}$	112	130 $\frac{2}{3}$	149 $\frac{1}{3}$	168	186 $\frac{2}{3}$	
8x16	7 $\frac{1}{2}$ x15 $\frac{1}{2}$	85 $\frac{1}{3}$	106 $\frac{2}{3}$	128	149 $\frac{1}{3}$	170 $\frac{2}{3}$	192	213 $\frac{1}{3}$	
10x10	9 $\frac{1}{2}$ x 9 $\frac{1}{2}$	66 $\frac{2}{3}$	83 $\frac{1}{3}$	100	116 $\frac{2}{3}$	133 $\frac{1}{3}$	150	166 $\frac{2}{3}$	
10x12	9 $\frac{1}{2}$ x11 $\frac{1}{2}$	80	100	120	140	160	180	200	
10x14	9 $\frac{1}{2}$ x13 $\frac{1}{2}$	93 $\frac{1}{3}$	116 $\frac{2}{3}$	140	163 $\frac{1}{3}$	186 $\frac{2}{3}$	210	233 $\frac{1}{3}$	
10x16	9 $\frac{1}{2}$ x15 $\frac{1}{2}$	106 $\frac{2}{3}$	133 $\frac{1}{3}$	160	186 $\frac{2}{3}$	213 $\frac{1}{3}$	240	266 $\frac{2}{3}$	

GENERAL WOOD CHARACTERISTICS

1. Degree of Workability with Hand Tools; **2.** Tendency to Warp; **3.** Tendency to Shrink or Swell; **4.** Relative Hardness; **5.** Comparative Weight.

Wood	1	2	3	4	5
Black Ash	L	I	H	H	I
White Ash	L	I	I	H	H
Basswood	H	I	H	L	L
Beech	L	H	H	H	H
Yellow Birch	L	I	H	H	H
Eastern Red Cedar	I	L	L	H	H
Western Red Cedar	H	L	L	L	L
Northern White Cedar	H	L	L	L	L
Southern White Cedar	H	L	L	L	L
Cherry	L	L	I	H	I
Chestnut	I	L	I	I	I
Cottonwood	I	H	H	L	I
Southern Cypress	I	I	I	I	I
Rock Elm	L	I	H	H	H
Soft Elm	L	H	H	H	H
Balsam Fir	I	I	I	L	L
Douglas Fir	L	I	I	I	I
White Fir	I	I	I	L	L
Red Gum	I	H	H	I	I
Eastern Hemlock	I	I	I	I	I
Western Hemlock	I	I	I	I	I
Pecan Hickory	L	I	H	H	H
True Hickory	L	I	H	H	H
Western Larch	L	I	I	H	H
Black Locust	L	I	I	H	H
Honey Locust	L	I	I	H	H
Mahogany	I	L	I	H	H
Hard Maple	L	I	H	H	H
Soft Maple	L	I	I	H	H
Red Oak	L	I	H	H	H
White Oak	L	I	H	H	H
Ponderosa Pine	H	L	I	L	I
Arkansas Soft Pine	H	L	L	L	L
Sugar Pine	H	L	L	L	L
Northern White Pine	H	L	L	L	L
Western White Pine	H	L	I	L	I
Southern Yellow Pine	L	I	I	H	H
Yellow Poplar	H	L	I	L	I
Redwood	I	L	L	I	I
Eastern Spruce	I	L	I	L	I
Englemann Spruce	I	L	I	L	L
Sitka Spruce	I	L	I	L	I
Sycamore	L	H	H	H	H
Tupelo	L	H	I	H	H
Walnut	I	L	I	H	H

H—High I—Intermediate L—Low

TO FIND NUMBER OF BOARD FEET IN A LOG

Subtract 4 inches from the diameter and square the remainder. The result will be the number of board feet in a 16-foot log. Add $\frac{1}{8}$ for 18-foot logs, $\frac{1}{4}$ for 20-foot logs. Subtract $\frac{1}{8}$ for 14-foot logs, $\frac{1}{4}$ for 12-foot logs.

TO FIGURE CORD WOOD

A cord of wood is 4 ft. wide, 4 ft. high, and 8 ft. long; it thus contains (4x4x8) 128 cu. ft. To figure cordage, determine cu. ft. of wood in pile, or on wagon, and divide by 128.

EXAMPLE: How many cords in a load 8 ft. x $2\frac{2}{3}$ ft. x 12 ft.? $8 \times 2\frac{2}{3} \times 12 = 256$; $256 \div 128 = 2$ cords.

COMMON NAILS REFERENCE TABLE

Size*	Length and Gauge No.		Diameter Head	Approx. No. to Pound
2d	1"	15	11/64"	845
3d	1 $\frac{1}{4}$ "	14	13/64"	540
4d	1 $\frac{1}{2}$ "	12 $\frac{1}{2}$	$\frac{1}{4}$ "	290
5d	1 $\frac{3}{4}$ "	12 $\frac{1}{2}$	$\frac{1}{4}$ "	250
6d	2"	11 $\frac{1}{2}$	17/64"	165
7d	2 $\frac{1}{4}$ "	11 $\frac{1}{2}$	17/64"	150
8d	2 $\frac{1}{2}$ "	10 $\frac{1}{4}$	9/32"	100
9d	2 $\frac{3}{4}$ "	10 $\frac{1}{4}$	9/32"	90
10d	3"	9	5/16"	65
12d	3 $\frac{1}{4}$ "	9	5/16"	60
16d	3 $\frac{1}{2}$ "	8	11/32"	45
20d	4"	6	13/32"	30
30d	4 $\frac{1}{2}$ "	5	7/16"	20
40d	5"	4	15/32"	17
50d	5 $\frac{1}{2}$ "	3	$\frac{1}{2}$ "	13
60d	6"	2	17/32"	10

FINISHING NAILS REFERENCE TABLE

Size*	Length and Gauge No.		Diam. Head Gauge	Approx. No. to Pound
3d	1 $\frac{1}{4}$ "	15 $\frac{1}{2}$	12 $\frac{1}{2}$	880
4d	1 $\frac{1}{2}$ "	15	12	630
6d	2"	13	10	290
8d	2 $\frac{1}{2}$ "	12 $\frac{1}{2}$	9 $\frac{1}{2}$	195
10d	3"	11 $\frac{1}{2}$	8 $\frac{1}{2}$	125

CASING NAILS REFERENCE TABLE

Size*	Length and Gauge No.		Diam. Head Gauge	Approx. No. to Pound
4d	1 $\frac{1}{2}$ "	14	11	490
6d	2"	12 $\frac{1}{2}$	9 $\frac{1}{2}$	245
8d	2 $\frac{1}{2}$ "	11 $\frac{1}{2}$	8 $\frac{1}{2}$	145
10d	3"	10 $\frac{1}{2}$	7 $\frac{1}{2}$	95
16d	3 $\frac{1}{2}$ "	10	7	72

*"d" indicates penny size.

WOOD SCREW INFORMATION

Wood Screw Sizes	Body Clearance Hole		Pilot Hole Size				Auger Bit Sizes by 16ths for Counter- bore Hole
			Hardwood *		Softwood †		
	nearest fractional size drill	accurate number or letter size drill	nearest fractional size drill	accurate number size drill	nearest fractional size drill	accurate number size drill	
0	1/16	53	1/32	70	—	—	—
1	5/64	48	1/32	66	1/32	71	—
2	3/32	43	3/64	56	1/32	65	3
3	7/64	38	1/16	54	3/64	58	4
4	7/64	33	1/16	52	3/64	55	4
5	1/8	30	5/64	49	1/16	53	4
6	9/64	28	5/64	47	1/16	52	5
7	5/32	24	3/32	44	1/16	51	5
8	11/64	19	3/32	40	5/64	48	6
9	3/16	15	7/64	37	5/64	45	6
10	3/16	10	7/64	33	3/32	43	6
11	13/64	5	1/8	31	3/32	40	7
12	7/32	2	1/8	30	7/64	38	7
14	1/4	D	9/64	25	7/64	32	8
16	17/64	I	5/32	18	9/64	29	9
18	19/64	N	3/16	13	9/64	26	10
20	21/64	P	13/64	4	11/64	19	11
24	3/8	V	7/32	1	3/16	15	12

*In hardwood bore pilot hole for almost all threaded part of screw. Usually pilot holes aren't needed for sizes No. 0 and No. 1.

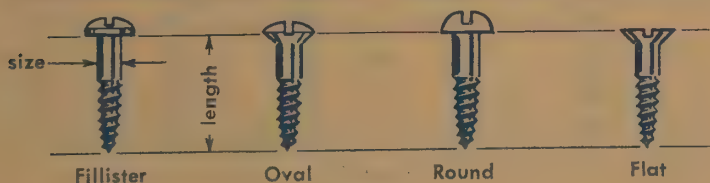
†In softwood bore pilot hole to half depth of threaded part of screw. Usually pilot holes aren't needed for screws under size No. 6.

Lengths Usually Available for Each Size Screw

LENGTH (inches)	SIZE	LENGTH (inches)	SIZE	LENGTH (inches)	SIZE
1/4	0- 4	1	4-18	2 1/2	8-24
3/8	2- 7	1 1/4	5-16	2 3/4	10-24
1/2	2-10	1 1/2	6-20	3	10-24
5/8	2-10	1 3/4	8-18	3 1/2	12-24
3/4	4-16	2	8-20	4	14-24
7/8	4-12	2 1/4	10-20		

HOW SCREWS ARE MEASURED

Size is measured across shank . . . length as shown in drawings.



CONCRETE MIXTURES RECOMMENDED FOR VARIOUS KINDS OF WORK

Kind of work	Proportions			Water required per sack of cement when sand or gravel are:		
	Cement	Sand	Gravel	Wet	Moist	Dry
	Sacks	Cu. Ft.	Cu. Ft.	Gals.	Gals.	Gals.
Very thin sections— 2 to 4 in. thick (fence posts, garden furniture, milk-cooling tanks)	1	2	2	3½	3¾	4½
Exceptional watertightness and resistance to abrasion— sections 4 to 8 in. thick (tanks, corner posts, silos)	1	2	3	3¾	4½	5½
General reinforced and watertight work sections 8 to 12 in. thick (basement walls, pavements, steps)	1	2½	3½	4½	5	6½
Mass concrete of moderate strength not watertight (footings, foundation walls)	1	3	5	5	6	7

APPROXIMATE QUANTITIES OF MATERIALS REQUIRED FOR MAKING ONE CUBIC YARD OF CONCRETE

Proportions of Concrete or Mortar			Quantities of Materials		
Cement	Sand	Gravel or Stone	Cement	Sand (damp and loose)	Gravel (loose)
			Sacks	(Cu. Yds.)	(Cu. Yd.)
1	1.5	.....	15.5	0.86	.....
1	2.0	.....	12.8	.95	.....
1	2.5	.....	11.0	1.02	.....
1	3.0	.....	9.6	1.07	.....
1	1.5	3	7.6	.42	0.85
1	2.0	2	8.2	.60	.60
1	2.0	3	7.0	.52	.78
1	2.0	4	6.0	.44	.89
1	2.5	3.5	5.9	.55	.77
1	2.5	4	5.6	.52	.83
1	2.5	5	5.0	.46	.92
1	3.0	5	4.6	.51	.85
1	3.0	6	4.2	.47	.94

Quantities may vary 10% depending on aggregate used.

CONCRETE BLOCKS

Concrete blocks to be properly made should be proportioned 1 part cement to 4 parts of fine gravel. This will give a block which, when properly cured, will be as strong as a solid concrete wall.

A concrete block to be properly cured should be well protected from the sun and dry winds. Blocks should not be removed from under cover until at least seven days after making. All blocks should be separated by pieces of lath for protection and for convenience in spraying.

Blocks should never be placed in a building until they are at least from 24 to 30 days old. Green blocks placed in a wall will crack from shrinkage.

PIPE DIMENSIONS

Nom. Inside Dia.	Actual Outside Dia.	Actual Inside Dia.	Nom. Inside Dia.	Actual Outside Dia.	Actual Inside Dia.
$\frac{1}{8}$	0.405	0.270	3	3.5	3.067
$\frac{1}{4}$	0.540	0.364	$3\frac{1}{2}$	4	3.548
$\frac{3}{8}$	0.675	0.494	4	4.5	4.026
$\frac{1}{2}$	0.840	0.623	$4\frac{1}{2}$	5	4.508
$\frac{3}{4}$	1.05	0.824	5	5.563	5.045
1	1.315	1.048	6	6.625	6.065
$1\frac{1}{4}$	1.66	1.38	7	7.625	7.023
$1\frac{1}{2}$	1.9	1.61	8	8.625	7.982
2	2.375	2.067	9	9.625	8.937
$2\frac{1}{2}$	2.875	2.468	10	10.75	10.019

NOTE: Dimensions above are in inches, and are for standard steel and wrought-iron pipe.

Capacity of 100 feet of pipe—based on actual internal diameter:

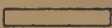
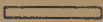
$\frac{3}{4}$ ".....	2.8 Gals.	2 "	17.4 Gals.
1 ".....	4.5 Gals.	$2\frac{1}{2}$ ".....	24.8 Gals.
$1\frac{1}{4}$ ".....	7.8 Gals.	3 "	38.3 Gals.
$1\frac{1}{2}$ ".....	10.6 Gals.		

CAPACITY OF ELECTRICAL WIRE, Rubber Covered

(Choose Fuse Sizes Accordingly)

Wire Size	8 B.S.	10 B.S.	12 B.S.	14 B.S.
In Cable or Conduit.....	48 amps	35 amps	26 amps	15 amps
In Knob-and-Tube Work...	50 amps	35 amps	30 amps	20 amps

DESCRIPTION AND USE OF FILES

SHAPE	CROSS SEC.	GENERAL USES
Mill		Sharpening mill, ice and circular saws, axes, implements, knives, shears, tools; lathe work; draw filing; polishing
Taper or Three Cornered		Sharpening saws, axes and milling cutters
Slim Taper		Sharpening circular, cross-cut and buck saws
Extra Slim Taper		Sharpening fine-tooth hand and hack saws
Double Extra Slim Taper		Sharpening fine-tooth saws
Cant Saw		Filing M-shaped teeth of cross-cut saws
Cross-Cut		Sharpening cross-cut saws of the great American type. Also wood or buck saws
Pit Saw		Filing teeth of pit or frame saws
Flat		A general-purpose file. Good for flat surfaces
Hand		Another general-purpose file for angles, corners, flat surfaces
Pillar		Keyways, slots and narrow work
Warding		Narrow work requiring thin file. Making keys
Square		Corners, grooves, keyways, slots
Three Square		Acute angles, corners, grooves, notches
Round		Holes, shaping curved surfaces
Half Round		Concave corners, crevices, rounding holes
Knife		Cleaning out acute angles, corners, slots

ADDRESSES

Name

Street and No.

City and State

Name

Street and No.

City and State

Name

Street and No.

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City and State

Farm Receipts for Month of _____

Date _____

Farm Expenditures for Month of _____

Date

Farm Receipts for Month of _____

Date _____

Farm Receipts for Month of _____

Date _____

Farm Expenditures for Month of _____

Date

Date _____

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Farm Expenditures for Month of _____

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Farm Receipts for Month of _____

Date _____

Farm Expenditures for Month of _____

Date _____

Farm Receipts for Month of _____

Date

CROP RECORD—THIS YEAR

CROP	ACRES	YIELD	VALUE
Corn			
Wheat			
Oats			
Barley			
Rye			
Clover			
Timothy			
Alfalfa			
Potatoes			
Beans			
Peas			
Onions			
Beets			
Cotton			
Peanuts			
Tobacco			
TOTAL			

CROP RECORD—LAST YEAR

Gestation Table on Page 56

GESTATION TABLE

Read across for expiration of period from date in first column. Thus: from Jan. 1st expiration date for mares is Dec. 6th, or 340 days from Jan. 1st; for cows, Oct. 10th, or 283 days from Jan. 1st. etc.

Time of Service	Mares 340 days	Cows 283 days	Ewes 150 days	Sows 114 days
Jan 1	Dec 6	Oct 10	May 30	Apr 25
" 6	" 11	" 15	June 4	" 30
" 11	" 16	" 20	" 9	May 5
" 16	" 21	" 25	" 14	" 10
" 21	" 26	" 30	" 19	" 15
" 26	" 31	Nov 4	" 24	" 20
" 31	Jan 5	" 9	" 29	" 25
Feb 5	" 10	" 14	July 4	" 30
" 10	" 15	" 19	" 9	June 4
" 15	" 20	" 24	" 14	" 9
" 20	" 25	" 29	" 19	" 14
" 25	" 30	Dec 4	" 24	" 19
Mar 2	Feb 4	" 9	" 29	" 24
" 7	" 9	" 14	Aug 3	" 29
" 12	" 14	" 19	" 8	July 4
" 17	" 19	" 24	" 13	" 9
" 22	" 24	" 29	" 18	" 14
" 27	Mar 1	Jan 3	" 23	" 19
Apr 1	" 6	" 8	" 28	" 24
" 6	" 11	" 13	Sep 2	" 29
" 11	" 16	" 18	" 7	Aug 3
" 16	" 21	" 23	" 12	" 8
" 21	" 26	" 28	" 17	" 13
" 26	" 31	Feb 2	" 22	" 18
May 1	Apr 5	" 7	" 27	" 23
" 6	" 10	" 12	Oct 2	" 28
" 11	" 15	" 17	" 7	Sep 2
" 16	" 20	" 22	" 12	" 7
" 21	" 25	" 27	" 17	" 12
" 26	" 30	Mar 4	" 22	" 17
" 31	May 5	" 9	" 27	" 22
June 5	" 10	" 14	Nov 1	" 27
" 10	" 15	" 19	" 6	Oct 2
" 15	" 20	" 24	" 11	" 7
" 20	" 25	" 29	" 16	" 12
" 25	" 30	Apr 3	" 21	" 17
" 30	June 4	" 8	" 26	" 22
July 5	" 9	" 13	Dec 1	" 27
" 10	" 14	" 18	" 6	Nov 1
" 15	" 19	" 23	" 11	" 6
" 20	" 24	" 28	" 16	" 11
" 25	" 29	May 3	" 21	" 16
" 30	July 4	" 8	" 26	" 21
Aug 4	" 9	" 13	" 31	" 26
" 9	" 14	" 18	Jan 5	Dec 1
" 14	" 19	" 23	" 10	" 6
" 19	" 24	" 28	" 15	" 11
" 24	" 29	June 2	" 20	" 16
" 29	Aug 3	" 7	" 25	" 21
Sep 3	" 8	" 12	" 30	" 26
" 8	" 13	" 17	Feb 4	" 31
" 13	" 18	" 22	" 9	Jan 5
" 18	" 23	" 27	" 14	" 10
" 23	" 28	July 2	" 19	" 15
" 28	Sep 2	" 7	" 24	" 20
Oct 3	" 7	" 12	Mar 1	" 25
" 8	" 12	" 17	" 6	" 30
" 13	" 17	" 22	" 11	Feb 4
" 18	" 22	" 27	" 16	" 9
" 23	" 27	Aug 1	" 21	" 14
" 28	Oct 2	" 6	" 26	" 19
Nov 2	" 7	" 11	" 31	" 24
" 7	" 12	" 16	Apr 5	Mar 1
" 12	" 17	" 21	" 10	" 6
" 17	" 22	" 26	" 15	" 11
" 22	" 27	" 31	" 20	" 16
" 27	Nov 1	Sep 5	" 25	" 21
Dec 2	" 6	" 10	" 30	" 26
" 7	" 11	" 15	May 5	" 31
" 12	" 16	" 20	" 10	Apr 5
" 17	" 21	" 25	" 15	" 10
" 22	" 26	" 30	" 20	" 15
" 27	Dec 1	Oct 5	" 25	" 20
" 31	" 5	" 9	" 29	" 24

HOW TO MIX PAINTS

In the list below, the color first named is invariably the principal ingredient, the others coming in the order of their importance.

Thus, in making a drab color, white is the chief ingredient, and should be put in the painting pot first, and the black is needed in the least quantity. It is better to have the base color rather thick, and the other colors thin.

To make:

Buff—White, yellow ochre, and red.

Chestnut—Red, black, and yellow.

Chocolate—Raw umber, red, and black.

Claret—Red, umber, and black.

Copper—Red, yellow, and black.

Dove—White, vermilion, blue, and yellow.

Drab—White, yellow ochre, red, and black.

Fawn—White, yellow, and red.

Flesh—White, yellow ochre, and vermilion.

Freestone—Red, black, yellow ochre, and white.

French Gray—White, Prussian blue, and lake.

CLEANING PAINTED SURFACES

Painted Woodwork. Wash with a solution of trisodium phosphate, which is sold under various trade names as a household cleaner. Use one cup of powder to ten quarts of hot water. Sponge on, let set a minute or two, and sponge off with clean water. Then wipe dry with clean rags. Do not use soap powders, which are likely to leave a film.

Painted Walls. 1. Dust walls carefully, using a vacuum cleaner extension brush if available. 2. Use the cleanser mentioned above, but add one-half cupful of household ammonia to ten quarts of the solution, especially for kitchen walls. Clean from bottom up, sponge with fresh water, and wipe dry as fast as different sections or spaces are cleaned.

SOME COMMON PAINT FAILURES

ALLIGATORING is random cracking of the paint resembling alligator's skin. It's caused by using a fast-drying paint that was too soft, i.e., it had too much oil, inferior oil, or the second coat was applied too soon after the first. BLISTERING is caused by moisture in the wood. BLOTCHING and FADING are caused by the wood absorbing the oil of the paint . . . more coats of paint should be applied. CRACKING and SCALING result from a poor grade of paint. TACKINESS and SLOW DRYING can be avoided by making sure each coat is very dry before applying the next. WRINKLING comes from applying the paint too thickly.

AMOUNT OF PAINT REQUIRED FOR A GIVEN SURFACE

It is impossible to give a rule that will apply in all cases, as the amount varies with the kind and the thickness of the paint, the kind of wood or other material to which it is applied, the age of the surface, etc. The following is an approximate rule: Divide the number of square feet of surface by 200. The result will be the number of gallons of liquid paint required to give two coats; or, divide by 18 and the result will be the number of pounds of pure ground white lead required to give three coats.

HOW TO KEEP PAINT BRUSHES IN GOOD CONDITION

KIND OF PAINT	SUSPEND IN	BEFORE RE-USING AND TO CLEAN BEFORE STORING
OIL	2 parts linseed oil 1 part turpentine	Rinse in turpentine Wipe dry
VARNISH OR ENAMEL	1 part varnish or enamel 1 part turpentine	Rinse in turpentine Wipe dry
SHELLAC	Denatured alcohol	Rinse in alcohol Wipe dry
WATER-MIXED	Wash with soap and water. Hang to dry. Hang brushes in liquid by placing thin rod through hole in handle and resting rod on rim of can. Do not let bristles rest on bottom of can. Between jobs, seal clean, dry brushes in foil or brush carrier.	

NOTE: Don't use brushes in varying types of paint . . . save oil-paint brushes for oil paint, varnish brushes for varnish, etc.

SPREADING RATES OF PAINT

Coating Material	Character of Surface	Surface Covered by 1 Gallon		
		1 Coat	2 Coats	3 Coats
		Sq. Ft.	Sq. Ft.	Sq. Ft.
Oil paint (gloss finish)	Smooth wood	600	325	225
	Rough wood	350	200	135
	Metal	700	340	230
	Plaster	450	250	175
	Hard Brick	400	225	160
	Soft Brick	350	200	150
	Smooth cement	350	200	150
	Rough cement (stucco)	200	100	...
Oil paint (flat finish)	Smooth wood or wall board	500	275	200
	Plaster	400	225	160
	Hard brick	350	200	150
	Soft brick	300	175	125
	Smooth cement	300	175	125
	Rough cement (stucco)	150	75	...
Enamel paint	Smooth, painted with undercoats	500	250	...
Exterior spar varnish	Smooth wood	500	275	200
Interior finishing varnish	Smooth wood	450	250	175
Shellac	Smooth wood	600	300	...
Shingle stain*	Rough wood	125	75	...
Asphalt roof paint	Smooth	250	...	...
	Rough	150	...	...
Asphalt-asbestos liquid roof cement	Smooth	100	...	...
Cold-water paint (5 lb. powder)	Smooth	300	...	...
Calcimine (5 lb. powder)	Plaster	400	...	...
Whitewash (4 to 5 lb. hydrated lime)	Wood	250	...	...
	Brick	200	...	...
	Plaster	300	...	...

*2½ gal. per 1,000 shingles when dipped two-thirds their length.

BELTING POINTERS

How to Find Length Required

When it is not convenient to measure with the tape-line, the length required, apply the following rule: Add the diameter of the two pulleys together, divide the result by 2, and multiply the quotient by $3\frac{1}{4}$; then add this product to twice the distance between the centers of the shafts, and you have the length required.

If possible to avoid, connected shafts should never be placed one directly over the other, as in such case, the belt must be kept very tight to do the work.

It is desirable that the angle of the belt with the floor should not exceed 45 degrees. It is also desirable to locate the shafting and machinery so that belts should run off from each shaft in opposite directions, as this arrangement will relieve the bearings from the friction that would result when the belts all pull one way on the shaft.

To Find the Belt Speed in Feet per Minute

Multiply diameter of pulley in inches by 3.1416. This gives circumference of pulley, and this result multiplied by number of revolutions will give you belt speed in inches.

Relative Transmission of H.P. for Any Given Width of Belt

The horsepower for a given speed will be directly proportioned to the width of the belt; that is, a 4-ply belt, 16 inches wide, running at a certain speed, will transmit eight times as much power as a 4-ply belt 2 inches wide, running at the same speed, and a belt 100 inches wide, ten times as much as a 10-inch belt of the same thickness, running at the same speed, etc.

To Find the H.P. That Any Given Belt Will Economically Transmit

Multiply the width of the belt in inches by its speed in feet and divide the result by 800. The final result will be the horsepower for a 4-ply belt. For a 6-ply belt, divide this result by 600; for 8-ply, divide this result by 400; for 10-ply, divide this result by 350.

To Find Ply Required of a Given Belt Width

To economically transmit a given horsepower at a given belt speed, multiply the given horsepower by 800 and the given width in inches by the given belt speed in feet, and divide the first result by the second.

If the final result is one, or nearly one, a 4-ply belt is required; if one and one-half, a 6-ply belt is required; if one and three-quarters to two, an 8-ply belt is required; if two to two and one-quarter, a 10-ply belt is required.

To Find Width of Belt Required

To find the width of a 4-ply belt required economically to transmit a given horsepower at a given belt speed per minute: Multiply the given horsepower by 800, and divide the result by the given belt speed.

To find the width of a 6-ply belt required: Multiply the horsepower by 600; divide the result by belt speed.

To find the width of an 8-ply belt required: Multiply horsepower by 400; divide result by belt speed.

To find the width of a 10-ply belt required: Multiply horsepower by 350; divide result by belt speed.

To Find Speed and Diameter of Pulleys

The product of the diameter and speed of the driving pulleys equals the product of the diameter and speed of the driven pulley; consequently, if the speed and the diameter of the driving pulley are given, multiply them together and divide by the diameter of the driven pulley to find the speed of the driven; or divide by the speed of the driven pulley to find its diameter.

Example—The drive pulley on a tractor is $9\frac{1}{2}$ inches in diameter and runs at 1,000 R.P.M.; what size pulley must be used on a thresher cylinder shaft that must run at 1,100 R.P.M.?

$9\frac{1}{2}$ times 1,000 equals 9,500; divided by 1,100, equals 8.64. Since pulleys are made only in certain standard diameters, use either the next size larger, 9-inch diameter, and raise the engine speed slightly, or use $8\frac{1}{2}$ -inch pulley, considering that the slight slippage will reduce the effective speed to the correct number of revolutions per minute.

WEIGHT OF GRAIN AND PRODUCE PER BUSHEL

Article	Weight in Pounds
Alfalfa	60
Apples, Green	50
Apples, Dried	24
Artichokes, Jerusalem	50
Barley, Spring—Winter	48
Beans, Castor	46
Beans, Dry	60
Beans, Green	24
Beans, Lima (Dry)	56
Beans, Lima (Unshelled)	32
Beans, Navy	60
Beans, Snap	30
Beans, Soy	60
Beans, White	60
Beets, Mangel Stock	30
Beets, Sugar	60
Bermuda Grass	40
Black Medic	60
Blue Grass Seed	14
Bran	20
Brome Grass	14
Broom Corn	48
Buckwheat	52
Cane Seed	50
Carpet Grass	18
Carrots	50
Clover Seed, All except "Burr"—12	60
Corn Kaffir	50-56
Corn, Pop (Ear)	56
Corn, Pop (Shelled)	56
Corn, Shelled	56
Corn in Ear, Shucked	70
Corn in Ear, with Husks	74
Corn, Meal	48
Corn, Sweet (Green)	35
Cotton Seed, Chemiclean	50
Cotton Seed, Fuzzy	32
Cowpeas	60
Cranberries	33
Crested Wheat Grass	22
Crotalaria	40
Cucumbers	48
Dallas Grass	10
Fescue, Meadow	24
Fescue, Red	14
Fescue, Sheep	14
Flax Seed	56
Gooseberries	40
Hemp Seed	44
Hickory Nuts	50
Hubam Seed	60
Hungarian Seed	48
Johnson Grass	28
Kale, Thousand Headed	50

WEIGHT OF GRAIN AND PRODUCE

PER BUSHEL—Continued

Article	Weight in Pounds
Lespedeza, Common (Japanese).....	25
Lespedeza, Kobe	25
Lespedeza, Korean	25
Lespedeza, Sericea (Hulled).....	60
Malt	38
Milletts, German for Hay.....	50
Milletts, German for Seed.....	50
Milletts, Hungarian for Hay.....	48
Milletts, Hungarian for Seed.....	48
Milletts, Japanese	35
Mung Beans	60
Oats	32
Onions	57
Onion Top Sets.....	30
Onion Bottom Sets.....	32
Orchard Grass Seed.....	14
Osage Orange	36
Parsnips	50
Peaches, Dried	33
Peaches, Green	48
Peanuts, Spanish	30
Peanuts, Virginia	22
Pears	50
Peas, Stock and Green.....	60
Potatoes, Irish	60
Potatoes, Sweet	46
Quinces	48
Rape Seed	50
Reed Canary Grass.....	44
Red Top, Solid Seed.....	14
Rice, Rough	45
Rutabagas	50
Rye, Grass	24
Rye, Spring—Winter	56
Sagrain	50
Salt	50
Sorghum, Grain	56
Sorghum, Sweet	50
Sorghum, Forage	50
Soybeans	60
Sudan Grass	40
Sunflower	32
Sweet Clover	60
Tall Oat Grass.....	14
Timothy Seed	45
Tomatoes	45
Turnips	42
Velvet Beans	60
Vetch, Winter or Hairy.....	60
Vetch, Spring	60
Walnuts	55
Wheat	60

RECOMMENDATIONS FOR CONTROLLING

Vegetable	Insect or disease	How to recognize injury	Control
Asparagus	Beetles	Spotted beetles feeding on feathery tops	DDT spray or dust (Use rotenone or methoxychlor during cutting season)
Beans	Potato leaf hopper	Leaf margins become yellow; plants stunted; yields much reduced	Pyrethrum or methoxychlor
	Anthraxnose	Red-brown sunken spots on pods	Don't use locally grown seed or work around plants when wet
	Bacterial blight	Water-soaked spots on pods, later turning reddish; have yellow area around water-soaked blotch	Same recommendations as for anthracnose; also, rotate ground
Crucifers: cabbage, cauliflower, broccoli, radishes, rutabagas, turnips	Maggots	Small white maggots feeding on roots; plants wilting and drying up	DDT on ground at planting time and at weekly intervals
	Cabbage worms	Irregular areas eaten in leaves	DDT before heads form; rotenone or methoxychlor after heads form
	Aphids	Curling of leaves	Nicotine sulfate
	Flea beetles	Small beetles eating many small holes in leaves	DDT
	Cutworms	Cutting off of plants	DDT on ground, plants at planting time
	Black rot	Stunted plants; yellow leaves with black veins; black ring in stem	Use western-grown seed; hot water seed treatment; clean seed-bed; rotation
	Yellows	Stunted plants; yellow leaves	Disease-resistant varieties
Carrots	Club root	Stunted plants; roots swollen and club-shaped; persists in soil many years	Plant healthy plants on disease-free soil
	Yellows	Purple or yellowish tops; multiple crowns; many small hairy roots	Use 3 or 4 applications of DDT at weekly intervals beginning when carrots are about 2 inches tall
			Methoxychlor or rotenone
Cucurbits: cucumbers, squash, melons	Cucumber beetles	Yellow and black beetles feeding on leaves, stems, flowers	Nicotine sulfate
	Melon aphids	Curling of leaves	Sabadilla, 10%
	Squash bugs	Bugs feeding on stems	

FACTS ABOUT INSECTICIDES RECOMMENDED ABOVE

Rotenone—To use as a spray, mix 4 tablespoons of 4% wettable powder per gallon of water or use as a $\frac{3}{4}$ to 1% dust. It may be used on crops nearing harvest time.

Pyrethrum—It is usually used as a .2% dust. It may also be used near harvest time.

DDT—One of the most useful insecticides, it may be obtained as a 5% dust, a 25% emulsifiable concentrate, or a 50% wettable powder. The 5% dust should be applied with a hand plunger or rotary duster.

COMMON GARDEN INSECTS AND DISEASES

Vegetable	Insect or disease	How to recognize injury	Control
Cucurbits: —Continued		cause wilting and death of plants	dust
	Mosaic	Mottling or crinkling of leaves; distorted fruits	Control aphids and weeds; plant disease-resistant varieties
	Bacterial wilt	Sudden wilting or dying	Control cucumber beetles
	Fusarium wilt	Melons wilt and die quickly; brown streaks along stems	Plant disease-resistant varieties
Onions	Thrips	Silvery patches on leaves, reduced yields	DDT
Peas	Pea aphid	Curled leaves; reduced yields	DDT or nicotine sulfate
Peppers	Aphids	Curling of leaves	Nicotine sulfate
	Flea beetles	Shot-holing of leaves	DDT
Potatoes	Colorado potato beetle	Striped orange and black beetles, reddish larvae feed on foliage	DDT, dust or spray
	Flea beetles	Shot-holing of leaves	DDT, dust or spray
	Potato leaf hoppers	Angular dead areas in leaf margins; reduced yields	DDT applied every 10 days, dust or spray
	Late blight	Irregular greenish-black spots with pale green border; white mold rings on underside	Dithane, parzate, fixed coppers; plant disease-resistant varieties
	Early blight	Dark brown spots with concentric rings	Dithane or parzate
Sweet corn	European corn borer	First evidence of injury is shot-holing of leaves in the whorl	Apply DDT at first evidence of feeding and again in five to seven days
	Corn earworm	Feeds on kernels, especially near tip of ear	Apply DDT to silks when 20% of ears show silk and again in about three days later when 90% show silk
Tomatoes	Aphids	Curling of leaves	Nicotine sulfate
	Flea beetles	Shot-holing of leaves	DDT
	Septoria leaf spot	Many small spots with gray centers on leaves; yellowing of plants	Dithane or parzate
	Late blight	Dark brown areas with firm surface on fruits; leaves as on potatoes	Dithane, parzate, fixed coppers
	Blossom end rot	Sunken dark spots on blossom end of fruit	Maintain uniform moisture supply; prevent a check in growth of plants; mulch

Sprays may be prepared with 1 $\frac{1}{3}$ tablespoons emulsifiable concentrate or 2 tablespoons wettable powder per gallon of water. The wettable powder is less likely to burn plants than the emulsifiable concentrate. DDT shouldn't be applied to edible parts of plants.

Methoxychlor—To use as a spray, mix 3 tablespoons of 50% wettable methoxychlor per gallon of water or use as a 5 to 10% dust. It is less hazardous than DDT and may be applied to edible parts of plants up to 7 days before harvest.

Nicotine Sulfate—Usually used as a spray; mix 2 teaspoons of 40% nicotine sulfate per gallon of water.

HOME FRUIT SPRAY PROGRAM

Many manufacturers now sell combination fruit sprays or dusts, using their own trade name. Check the label for the contents to be sure a particular product contains the ingredients suggested below. You may need more than one combination for the season's work.

Apples and Pears

When to apply	Sprays or dusts should contain these materials	Diseases and insects controlled
1. Pink Spray: start when fruit buds show pink at tips.	Ferbam plus dieldrin or lead arsenate or methoxychlor.	Apple scab, Cedar rust, Curculio.
2. Petal-fall (calyx) spray: after $\frac{3}{4}$ of the petals have fallen.	Ferbam plus lead arsenate, or dieldrin plus DDT, or methoxychlor plus DDT.	Apple scab, Cedar rust, Curculio, Codling moth.
3. First cover spray: five to seven days after petal-fall spray.	Ferbam plus lead arsenate, or dieldrin plus DDT, or methoxychlor plus DDT.	Apple scab, Codling moth, Curculio, Oystershell scale*.
4. First maggot spray: one week after first maggot flies appear or about July 15. Watch papers and radio for orchard pest warning.	Ferbam plus lead arsenate or DDT or methoxychlor.	Apple maggot, Codling moth, Apple scab.
5. Second maggot spray: two weeks after first maggot spray.	Ferbam plus lead arsenate or DDT or methoxychlor. Sanitation†	Apple maggot, Codling moth, Curculio.

Stone Fruits — Plums, Cherry-plums, etc.

1. Petal-fall spray: when $\frac{3}{4}$ of the petals have fallen.	Ferbam plus dieldrin or lead arsenate.	Brown rot, Curculio.
2. Shuck-fall: when shucks (membranous coverings) are starting to fall.	Ferbam plus dieldrin or lead arsenate.	Brown rot, Leaf spot, Curculio, Aphids‡.
3. First cover spray: ten days after spray No. 1.	Ferbam plus dieldrin or lead arsenate.	Brown rot, Leaf spot, Curculio, Aphids‡.
4. Preharvest spray: when the normal fruits just begin to show color.	Ferbam.	Brown rot.

Grapes

1. When blossoming starts.	Ferbam.	Black rot.
2. When grapes in cluster start to touch each other.	Ferbam plus DDT.	Black rot, Leafhopper.

*If oystershell scale is serious, use DDT.

†Pick up and safely dispose of fallen apples to prevent complete development of maggots and further infestation. Effective only when practiced also on nearby fruit trees.

‡When aphids are present, use malathion or nicotine sulfate.

Currants and Gooseberries

When to apply	Sprays or dusts should contain these materials	Diseases and insects controlled
1. When terminal leaves are 1/2 to 1 inch long.	Lead arsenate or DDT plus malathion or nicotine sulfate.	Currant worm, Aphids.
2. After berries are forming.	Methoxychlor.	Currant worm.

Raspberries

1. When leaves are fully expanded.	Ferbam.	Anthrachnose, Spur blight.
2. When blossom buds first show.	Ferbam plus DDT.	Sawfly, Fruit worm, Anthracnose, Spur blight.

Strawberries

1. Soil treatment before planting.	Aldrin or heptachlor or dieldrin or chlordane.	White grubs.
2. Just as first spring blossom buds appear; repeat after heavy rains until first fruits set.	Methoxychlor or DDT plus malathion.	Sawfly, Weevil, Tarnished plant bug, Red spider.

WHEN TO PLANT

Planting times must be adjusted to local conditions. Planting must not be done until the soil is loose and mellow several inches down. And it must be done in time to allow the plants to mature. Cabbage, Cauliflower and Tomatoes are best started from seed in a hotbed and later transplanted.

Asparagus	April to May
Beets	April to Aug.
Bush Beans	May to Aug.
Cabbage	April to May
Carrots	April to July
Cauliflower	April to May
Celery	March to April
Corn	May to July
Cucumbers	April to July
Lettuce	April to Aug.
Onions	April to May
Parsley	April to June
Parsnips	April to June
Peas	April to July
Potatoes	March to June
Radishes	April to Aug.
Spinach	April to Aug.
Tomatoes	May to June
Turnips	April to Aug.

TEMPERATURES DANGEROUS TO FRUITS AND PLANTS

Plants may often be saved from injury from frost if given slight protection. A cover of cheesecloth is usually sufficient; branches of trees will sometimes suffice.

In small sheltered gardens frost may sometimes be warded off by building a smudge fire or by placing shallow pans of water near the plants.

Frost usually comes when the sky is clear, the wind dies down at sunset, and the air has a crisp, sharp feeling.

The following table shows the temperatures at which the plants mentioned are liable to receive injury from frost.

PLANT OR FRUIT	In Bud	In Blossom	In Setting Fruit	At Other Times
Apples.....	27	29	30	26
Apricots.....	30	31	32	30
Asparagus.....	29	29	29	26
Barley.....	.....	29	.....	.....
Beans.....	.....	31	.....	.....
Beets.....	.....	.....	.....	25
Cabbage.....	.....	.....	.....	15-27
Cantaloupes.....	32	32	.....	30-31
Cauliflower.....	.....	.....	.....	20-27
Celery.....	.....	.....	.....	28
Cucumbers.....	31	31	31	32
Cymlings or squash.....	31	31	31	30
Grapes.....	31	31	30	28
Lemons.....	30	31	31	28
Lettuce.....	.....	.....	.....	12-28
Oats.....	31	.....	.....	.....
Okra.....	.....	.....	.....	31
Onions.....	.....	.....	.....	20
Parsnips.....	.....	.....	.....	27
Peaches.....	29	30	30	29
Pears.....	28	29	29	28
Peas.....	29	30	30	25
Plums.....	30	31	31	29
Potatoes: Irish.....	30	30	30	31
Potatoes: Sweet.....	31	31	31	31
Prunes.....	30	31	31	29
Radishes.....	.....	.....	.....	25
Shrubs, trees, or roses.....	26-30	28-32	.....	30-26
Spinach.....	.....	.....	.....	21
Strawberries.....	28	28	28	30
Tomatoes.....	31	31	31	31
Turnips.....	.....	.....	.....	26
Watermelons.....	.....	.....	.....	28-31
Wheat.....	.....	31	31	.....
Walnuts, English.....	30	31	31	28

RECOMMENDED GARDEN PLANTING DISTANCES

Plant	Distance between plants	Plant	Distance between plants
INCHES		INCHES	
Beans, bush Lima	3-4	Parsnips	3-4
Beans, bush Snap	3-4	Peas	1-2
Beans, pole Snap	6-8	Pumpkin	15-18
Beets	2-3	Radishes	1-1½
Carrots	1-2	Rutabagas	6-8
Chard	6-8	Spinach	2-3
Cucumbers	8-10	Squash	15-18
Kohlrabi	3-4	Sweet Corn	10-12
Lettuce, leaf	3-4	Turnips	3-4
Muskmelons	10-12	Watermelon	15-18
Onions	2-4		

TIME NEEDED FOR GARDEN SEEDS TO GERMINATE

	Days		Days
Bean	5 to 10	Lettuce	6 to 8
Beet	7 to 10	Onion	7 to 10
Cabbage	5 to 10	Pea	6 to 10
Carrot	12 to 18	Parsnip	10 to 20
Cauliflower	5 to 10	Pepper	9 to 14
Celery	10 to 20	Radish	3 to 6
Corn	5 to 8	Tomato	6 to 12
Cucumber	6 to 10	Turnip	4 to 8

TABLE OF WEIGHTS AND MEASURES

Fruit or Vegetable	Measure	Weight	Quart Jars
Red Raspberries	24 pt. crate	16 lbs. net	8
Strawberries	16 qt. crate	22 lbs. net	8
Cherries	16 qt. crate	22 lbs. net	12
Peaches	1 bushel	48 to 50 lbs.	25
String Beans	1 peck	6 lbs.	6-8 pints
Carrots	1 bushel	50 lbs.	40 pints
Corn	1 bushel	70 lbs.	16 pints
Tomatoes	1 peck	14 lbs.	7-9 pints

NUMBER OF SHRUBS OR PLANTS FOR AN ACRE

Distance Apart	No. of Plants	Distance Apart	No. of Plants	Distance Apart	No. of Plants
3 x3 inches	696,690	4 x 4 feet	2,722	13 x13 feet	257
4 x4 "	392,040	4½x 4½ "	2,151	14 x14 "	222
6 x6 "	174,240	5 x 1 "	8,712	15 x15 "	193
9 x9 "	77,440	5 x 2 "	4,356	16 x16 "	170
1 x1 foot	43,560	5 x 3 "	2,904	16½x16½ "	160
1½x1½ feet	19,360	5 x 4 "	2,178	17 x17 "	150
2 x1 "	21,780	5 x 5 "	1,742	18 x18 "	134
2 x2 "	10,890	5½x 5½ "	1,417	19 x19 "	120
2½x2½ "	6,960	6 x 6 "	1,210	20 x20 "	108
3 x1 "	14,620	6½x 6½ "	1,031	25 x25 "	69
3 x2 "	7,260	7 x 7 "	881	30 x30 "	48
3 x3 "	4,840	8 x 8 "	680	33 x33 "	40
3½x3½ "	3,555	9 x 9 "	537	40 x40 "	27
4 x1 "	10,890	10 x10 "	435	50 x50 "	17
4 x2 "	5,445	11 x11 "	360	60 x60 "	12
4 x3 "	3,630	12 x12 "	302	66 x66 "	10

FRUIT-BEARING TABLE

PLANT OR FRUIT	Time to Bear	Good Crop	Length of Bearing Season
Apple.....	3 years	10 years	25-40 years
Blackberry.....	1 year	3 years	6-14 years
Currant.....	1 year	3 years	20 years
Gooseberry.....	1 year	3 years	20 years
Oranges and Lemons..	3 years	6 years	50 years
Peach.....	2 years	5 years	12 years
Pear.....	4 years	12 years	75 years
Plum.....	3 years	6 years	25 years
Quince.....	2 years	4 years	15 years
Raspberry.....	1 year	3 years	12 years
Strawberry.....	1 year	2 years	3 years

POUNDS OF FERTILIZER PER 100 FT.

Lbs. per Acre	Distance Between Rows (Stalk to Stalk)									
	28 in.		32 in.		34 in.		36 in.		40 in.	
	lb.	oz.	lb.	oz.	lb.	oz.	lb.	oz.	lb.	oz.
200	1	1	1	4	1	5	1	6	1	8
300	1	8	1	13	1	15	2	1	2	5
400	2	2	2	7	2	10	2	12	3	1
500	2	11	3	1	3	4	3	7	3	13
600	3	3	3	11	3	14	4	2	4	9
800	4	4	4	14	5	3	5	8	6	2
1000	5	6	6	2	6	8	6	14	7	10
1500	8	0	9	3	9	12	10	5	11	7
2000	10	11	12	4	13	0	13	12	15	4

Pounds of Seed Used Per Acre — Close Drills

Alfalfa	8-20	Kaffir	15-45
Barley	72-96	Lespedeza in Old Pas- tures or with	
Blue Grass	15-25	Mixtures	12-15
Buckwheat	36-60	Lespedeza for Hay	
Cane or Sorghum	15-75	Crop	20-25
Clover, Alsike	7-8	Oats	48-128
Clover, Hop and Red	8-12	Orchard Grass	20-28
Clover, White	5-7	Pumpkin	4
Corn, for Grain	6-10	Peanuts (Shelled)	25-30
Corn, for Silage	8-18	Peanuts (Unshelled) ..	35-45
Cotton, fuzzy	32-50	Red Top (Solid Seed) ..	6-8
Field Pea, Austrian Winter	30-90	Rice (Rough)	67-160
Field Pea, Small Seeded	90-120	Rye	28-112
Field Pea, Large Seeded	120-180	Soybeans, Small Seeded (double for large) ..	75-120
Flax for Seed	28-42	Sunflowers	8-10
Flax for Fiber	84	Sweet Clover (unhulled)	30-45
Hemp	44	Sweet Clover (hulled) ..	12-15
Hungarian Grass or		Timothy	12-15
Millet	15-35	Wheat	30-120

In the sowing of seed there is so much to be considered in determining the quantity to be sown, such as type and quality of soil, locality, moisture, etc., that the above figures should be used only as approximating the correct amount.

COST OF ONE POUND AT A GIVEN PRICE AND WEIGHT PER BUSHEL

Note: Intermediate prices not shown in table may be determined simply by combining figures. Example: At 32 lbs./bu. and \$1.54/bu., 1 lb. costs $4.813¢ = 4.688¢$ (@ \$1.50/bu.) + .125¢ (@ 4¢/bu.).

When a Bushel Costs Cents	WHEN A BUSHEL WEIGHS				
	32 Lbs.	48 Lbs.	56 Lbs.	60 Lbs.	70 Lbs.
	1 Lb. Costs	1 Lb. Costs	1 Lb. Costs	1 Lb. Costs	1 Lb. Costs
1	0.031	0.021	0.018	0.017	0.014
2	0.063	0.042	0.036	0.033	0.029
3	0.094	0.062	0.054	0.050	0.043
4	0.125	0.083	0.071	0.067	0.057
5	0.156	0.104	0.089	0.083	0.071
6	0.188	0.125	0.107	0.100	0.086
7	0.219	0.146	0.125	0.117	0.100
8	0.250	0.167	0.143	0.133	0.114
9	0.281	0.187	0.161	0.150	0.129
10	0.313	0.208	0.179	0.167	0.143
15	0.469	0.312	0.268	0.250	0.214
20	0.625	0.417	0.357	0.333	0.286
25	0.781	0.521	0.446	0.417	0.357
30	0.937	0.625	0.536	0.500	0.429
35	1.094	0.729	0.625	0.583	0.500
40	1.250	0.833	0.714	0.667	0.571
45	1.406	0.937	0.804	0.750	0.643
50	1.563	1.042	0.893	0.833	0.714
55	1.719	1.146	0.982	0.917	0.786
60	1.875	1.250	1.071	1.000	0.857
65	2.031	1.354	1.161	1.083	0.929
70	2.188	1.458	1.250	1.167	1.000
75	2.344	1.562	1.339	1.250	1.071
80	2.500	1.667	1.429	1.333	1.143
85	2.656	1.771	1.518	1.417	1.214
90	2.813	1.875	1.607	1.500	1.286
95	2.969	1.979	1.696	1.583	1.357
100	3.125	2.083	1.786	1.667	1.429
105	3.281	2.187	1.875	1.750	1.500
110	3.438	2.292	1.964	1.833	1.571
115	3.594	2.396	2.054	1.917	1.643
120	3.750	2.500	2.143	2.000	1.714
125	3.906	2.604	2.232	2.083	1.786
130	4.062	2.708	2.321	2.167	1.857
135	4.219	2.812	2.411	2.250	1.928
140	4.375	2.917	2.500	2.333	2.000
145	4.531	3.021	2.589	2.417	2.071
150	4.688	3.125	2.679	2.500	2.143

COST OF ONE POUND AT A GIVEN PRICE AND WEIGHT PER BUSHEL — Continued

When a Bushel Costs Cents	WHEN A BUSHEL WEIGHS				
	32 Lbs.	48 Lbs.	56 Lbs.	60 Lbs.	70 Lbs.
	1 Lb. Costs	1 Lb. Costs	1 Lb. Costs	1 Lb. Costs	1 Lb. Costs
155	4.844	3.229	2.768	2.583	2.214
160	5.000	3.333	2.857	2.667	2.286
165	5.156	3.437	2.946	2.750	2.357
170	5.313	3.542	3.036	2.833	2.429
175	5.469	3.646	3.125	2.917	2.500
180	5.625	3.750	3.214	3.000	2.571
185	5.781	3.854	3.304	3.083	2.643
190	5.937	3.958	3.393	3.167	2.714
195	6.094	4.062	3.482	3.250	2.786
200	6.250	4.167	3.571	3.333	2.857
205	6.406	4.271	3.661	3.417	2.928
210	6.563	4.375	3.750	3.500	3.000
215	6.719	4.479	3.839	3.583	3.071
220	6.875	4.583	3.929	3.667	3.143
225	7.031	4.687	4.018	3.750	3.214
230	7.188	4.792	4.107	3.833	3.286
235	7.344	4.896	4.196	3.917	3.357
240	7.500	5.000	4.286	4.000	3.429
245	7.656	5.104	4.375	4.083	3.500
250	7.813	5.208	4.464	4.167	3.571
255	7.969	5.312	4.554	4.250	3.643
260	8.125	5.417	4.643	4.333	3.714
265	8.281	5.521	4.732	4.417	3.786
270	8.438	5.625	4.821	4.500	3.857
275	8.594	5.729	4.911	4.583	3.929
280	8.750	5.833	5.000	4.666	4.000
285	8.906	5.937	5.089	4.750	4.071
290	9.063	6.042	5.179	4.833	4.143
295	9.219	6.146	5.268	4.917	4.214
300	9.375	6.250	5.357	5.000	4.286
305	9.531	6.354	5.446	5.083	4.357
310	9.688	6.458	5.536	5.166	4.428
315	9.844	6.562	5.625	5.250	4.500
320	10.000	6.667	5.714	5.333	4.571
330	10.312	6.875	5.893	5.500	4.714
340	10.625	7.083	6.071	5.667	4.857
350	10.938	7.292	6.250	5.833	5.000
360	11.250	7.500	6.429	6.000	5.143
370	11.563	7.708	6.607	6.167	5.286
380	11.875	7.917	6.786	6.333	5.429
390	12.188	8.125	6.964	6.500	5.571
400	12.500	8.333	7.143	6.667	5.714

COTTON PICKING TABLE

RAPID CALCULATOR

Lbs.	\$1.00	\$1.25	\$1.50	\$1.75	\$2.00	\$2.25	\$2.50
1	.01	.01	.01	.01	.02	.02	.02
2	.02	.02	.03	.03	.04	.04	.05
3	.03	.03	.04	.05	.06	.06	.07
4	.04	.05	.06	.07	.08	.09	.10
5	.05	.06	.07	.08	.10	.11	.12
10	.10	.12	.15	.17	.20	.22	.25
15	.15	.18	.22	.26	.30	.34	.37
20	.20	.25	.30	.35	.40	.45	.50
25	.25	.31	.37	.43	.50	.56	.62
30	.30	.37	.45	.52	.60	.67	.75
35	.35	.43	.52	.61	.70	.78	.87
40	.40	.50	.60	.70	.80	.90	1.00
45	.45	.56	.67	.78	.90	1.01	1.12
50	.50	.62	.75	.87	1.00	1.12	1.25
55	.55	.68	.82	.96	1.10	1.23	1.32
60	.60	.75	.90	1.05	1.20	1.35	1.50
65	.65	.81	.97	1.13	1.30	1.46	1.62
70	.70	.87	1.05	1.22	1.40	1.57	1.75
75	.75	.93	1.12	1.31	1.50	1.68	1.87
80	.80	1.00	1.20	1.40	1.60	1.80	2.00
85	.85	1.06	1.27	1.48	1.70	1.91	2.12
90	.90	1.12	1.35	1.57	1.80	2.02	2.25
95	.95	1.18	1.42	1.66	1.90	2.13	2.37
100	1.00	1.25	1.50	1.75	2.00	2.25	2.50
105	1.05	1.31	1.57	1.83	2.10	2.36	2.62
110	1.10	1.37	1.65	1.92	2.20	2.45	2.75
115	1.15	1.43	1.72	2.01	2.30	2.56	2.87
120	1.20	1.50	1.80	2.10	2.40	2.70	2.90
125	1.25	1.56	1.87	2.18	2.50	2.81	3.12
130	1.30	1.62	1.95	2.27	2.60	2.92	3.25
135	1.35	1.68	2.02	2.36	2.70	3.03	3.37
140	1.40	1.75	2.10	2.45	2.80	3.15	3.50
145	1.45	1.81	2.17	2.53	2.90	3.26	3.62
150	1.50	1.87	2.25	2.62	3.00	3.37	3.75
155	1.55	1.93	2.32	2.71	3.10	3.48	3.87
160	1.60	2.00	2.40	2.80	3.20	3.60	4.00
165	1.65	2.06	2.47	2.88	3.30	3.71	4.12
170	1.70	2.12	2.55	2.97	3.40	3.82	4.24
175	1.75	2.18	2.62	3.06	3.50	3.93	4.36
180	1.80	2.25	2.70	3.15	3.60	4.05	4.50
185	1.85	2.31	2.77	3.23	3.70	4.16	4.62
190	1.90	2.37	2.85	3.32	3.80	4.27	4.75
195	1.95	2.43	2.92	3.41	3.90	4.38	4.87
200	2.00	2.50	3.00	3.50	4.00	4.50	5.00
225	2.25	2.81	3.37	3.93	4.50	5.06	5.62
250	2.50	3.12	3.75	4.37	5.00	5.62	6.24
275	2.75	3.47	4.12	4.81	5.50	6.18	6.86
300	3.00	3.75	4.50	5.25	6.00	6.75	7.50
325	3.25	4.06	4.87	5.68	6.50	7.31	8.12
350	3.50	4.37	5.25	6.12	7.00	7.87	8.75
375	3.75	4.68	5.62	6.56	7.50	8.43	9.37
400	4.00	5.00	6.00	7.00	8.00	9.00	10.00
450	4.50	5.62	6.75	7.87	9.00	10.02	11.25
500	5.00	6.25	7.50	8.75	10.00	11.25	12.50

COTTON PICKING TABLE

RAPID CALCULATOR

Lbs.	\$2.75	\$3.00	\$3.25	\$3.50	\$3.75	\$4.00	\$4.25
1	.02	.03	.03	.04	.04	.04	.04
2	.05	.06	.07	.07	.08	.08	.09
3	.08	.09	.10	.11	.11	.12	.13
4	.11	.12	.13	.14	.15	.16	.17
5	.13	.15	.16	.18	.19	.20	.21
10	.27	.30	.33	.35	.38	.40	.43
15	.41	.45	.49	.53	.56	.60	.64
20	.55	.60	.65	.70	.75	.80	.85
25	.68	.75	.81	.88	.94	1.00	1.06
30	.82	.90	.98	1.05	1.13	1.20	1.28
35	.96	1.05	1.14	1.23	1.31	1.40	1.49
40	1.10	1.20	1.30	1.40	1.50	1.60	1.70
45	1.23	1.35	1.46	1.58	1.69	1.80	1.91
50	1.37	1.50	1.63	1.75	1.88	2.00	2.13
55	1.51	1.65	1.79	1.93	2.06	2.20	2.34
60	1.60	1.80	1.95	2.10	2.25	2.40	2.55
65	1.78	1.95	2.11	2.28	2.44	2.60	2.76
70	1.92	2.10	2.28	2.45	2.63	2.80	2.98
75	2.06	2.25	2.44	2.63	2.81	3.00	3.19
80	2.20	2.40	2.60	2.80	3.00	3.20	3.40
85	2.35	2.55	2.76	2.98	3.19	3.40	3.61
90	2.47	2.70	2.93	3.15	3.38	3.60	3.83
95	2.61	2.85	3.09	3.33	3.56	3.80	4.04
100	2.75	3.00	3.25	3.50	3.75	4.00	4.25
105	2.88	3.15	3.41	3.68	3.94	4.20	4.46
110	3.02	3.30	3.58	3.85	4.13	4.40	4.68
115	3.16	3.45	3.74	4.03	4.31	4.60	4.89
120	3.30	3.60	3.90	4.20	4.50	4.80	5.10
125	3.43	3.75	4.06	4.38	4.69	5.00	5.31
130	3.57	3.90	4.23	4.55	4.88	5.20	5.53
135	3.70	4.05	4.39	4.73	5.06	5.40	5.74
140	3.85	4.20	4.55	4.90	5.25	5.60	5.95
145	3.98	4.35	4.71	5.07	5.44	5.80	6.16
150	4.12	4.50	4.88	5.25	5.63	6.00	6.38
155	4.26	4.65	5.04	5.43	5.81	6.20	6.59
160	4.40	4.80	5.20	5.60	6.00	6.40	6.80
165	4.53	4.95	5.36	5.78	6.19	6.60	7.01
170	4.66	5.10	5.53	5.95	6.38	6.80	7.23
175	4.79	5.25	5.69	6.13	6.56	7.00	7.44
180	4.95	5.40	5.85	6.30	6.75	7.20	7.65
185	5.08	5.55	6.01	6.48	6.94	7.40	7.86
190	5.22	5.70	6.18	6.65	7.13	7.60	8.08
195	5.36	5.85	6.34	6.83	7.31	7.80	8.29
200	5.50	6.00	6.50	7.00	7.50	8.00	8.50
225	6.18	6.75	7.31	7.88	8.44	9.00	9.56
250	6.86	7.50	8.13	8.75	9.38	10.00	10.63
275	7.54	8.25	8.94	9.63	10.31	11.00	11.69
300	8.25	9.00	9.75	10.50	11.25	12.00	12.75
325	8.93	9.75	10.56	11.38	12.19	13.00	13.81
350	9.62	10.50	11.38	12.25	13.13	14.00	14.88
375	10.31	11.25	12.19	13.13	14.06	15.00	15.94
400	11.00	12.00	13.00	14.00	15.00	16.00	17.00
450	12.37	13.50	14.63	15.75	16.88	18.00	19.13
500	13.75	15.00	16.25	17.50	18.75	20.00	21.25

COST OF ONE POUND OF FEED AT A GIVEN PRICE PER TON

Price Per Ton	Cost of 1 Lb. Cents	Price Per Ton	Cost of 1 Lb. Cents	Price Per Ton	Cost of 1 Lb. Cents
\$ 25.00	1.25	\$ 73.00	3.65	\$113.00	5.65
30.00	1.50	74.00	3.70	114.00	5.70
35.00	1.75	75.00	3.75	115.00	5.75
36.00	1.80	76.00	3.80	116.00	5.80
37.00	1.85	77.00	3.85	117.00	5.85
38.00	1.90	78.00	3.90	118.00	5.90
39.00	1.95	79.00	3.95	119.00	5.95
40.00	2.00	80.00	4.00	120.00	6.00
41.00	2.05	81.00	4.05	121.00	6.05
42.00	2.10	82.00	4.10	122.00	6.10
43.00	2.15	83.00	4.15	123.00	6.15
44.00	2.20	84.00	4.20	124.00	6.20
45.00	2.25	85.00	4.25	125.00	6.25
46.00	2.30	86.00	4.30	126.00	6.30
47.00	2.35	87.00	4.35	127.00	6.35
48.00	2.40	88.00	4.40	128.00	6.40
49.00	2.45	89.00	4.45	129.00	6.45
50.00	2.50	90.00	4.50	130.00	6.50
51.00	2.55	91.00	4.55	131.00	6.55
52.00	2.60	92.00	4.60	132.00	6.60
53.00	2.65	93.00	4.65	133.00	6.65
54.00	2.70	94.00	4.70	134.00	6.70
55.00	2.75	95.00	4.75	135.00	6.75
56.00	2.80	96.00	4.80	136.00	6.80
57.00	2.85	97.00	4.85	137.00	6.85
58.00	2.90	98.00	4.90	138.00	6.90
59.00	2.95	99.00	4.95	139.00	6.95
60.00	3.00	100.00	5.00	140.00	7.00
61.00	3.05	101.00	5.05	145.00	7.25
62.00	3.10	102.00	5.10	150.00	7.50
63.00	3.15	103.00	5.15	155.00	7.75
64.00	3.20	104.00	5.20	160.00	8.00
65.00	3.25	105.00	5.25	165.00	8.25
66.00	3.30	106.00	5.30	170.00	8.50
67.00	3.35	107.00	5.35	175.00	8.75
68.00	3.40	108.00	5.40	180.00	9.00
69.00	3.45	109.00	5.45	185.00	9.25
70.00	3.50	110.00	5.50	190.00	9.50
71.00	3.55	111.00	5.55	195.00	9.75
72.00	3.60	112.00	5.60	200.00	10.00

ANTIDOTES FOR POISONS

First.—Send for a Physician.

Second.—Induce vomiting by tickling throat with feather or finger; drinking hot water or strong mustard and water. Swallow sweet oil or whites of eggs.

Acids are antidotes for **Alkalies**, and vice versa.

Special Poisons and Antidotes

Acids.—Muriatic, Oxalic, Acetic, Sulphuric (oil of Vitriol), Nitric (Acqua Fortis). { Soap-suds, magnesia, lime-water

Prussic Acid.—Ammonia in water. Dash water in face.

Carbolic Acid.—Flour and water, mucilaginous drinks.

Alkalies.—Potash, Lye, Hartshorn, Ammonia. { Vinegar or Lemon juice in water.

Arsenic.—Rat Poison, Paris Green. { Milk, raw egg, sweet oil, lime-water, flour and water.

Bug Poison. — Lead, Saltpetre, Corrosive Sublimate, Sugar of Lead, Blue Vitriol. { Whites of eggs, or milk in large doses.

Chloroform.—Chloral, Ether. { Dash Cold Water on Head and Chest. Artificial Respiration.

Carbonate of Soda.—Copperas, Cobalt. { Soap-suds and mucilaginous drinks.

Iodine.—Antimony Tartar, Emetic. { Starch and water, astringent infusions, strong tea.

Mercury and its Salts. { Whites of eggs, milks, mucilage.

Opium.—Morphine, Laudanum, Paregoric, Soothing Powders or Syrups. Strong coffee, hot bath. Keep awake and moving at any cost.

Nitrate of Silver.—Lunar Caustic. { Salt and water.

Strychnine.—Tincture of Nux Vomica. Mustard and water. Sulphate of Zinc. Absolute quiet. Plug the ears.

FARM MACHINE EXPENSES

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CALENDAR FOR 1958

JANUARY S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	FEBRUARY S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	MARCH S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
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CALENDAR FOR 1959

JANUARY S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	FEBRUARY S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	MARCH S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
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